

**EVALUATION REPORT ON THE DEVELOPMENT AND
IMPLEMENTATION OF A LUMMI NATION
NPDES PROGRAM**



December 2005

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NPDES PROGRAM**

Prepared For:

**Lummi Indian Business Council
(LIBC)**

Funded By:

**Environmental Protection Agency
Assistance Identification No. BG-97042601-2**

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December 2005

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EXECUTIVE SUMMARY

Clean water is essential for the political integrity, economic security, health, and welfare of the Lummi Nation and its members, and all persons present on the Lummi Indian Reservation (Reservation). The Lummi Nation has developed a Comprehensive Water Resources Management Program (CWRMP) and the Lummi Code of Laws Water Resources Protection Code Title 17 (Title 17) to protect, enhance, and restore quality of the Reservation surface and ground water, including the Reservation estuaries and water over Reservation tidelands. The Federal Clean Water Act (CWA) also addresses surface water quality protection. The Clean Water Act Section 402 establishes the National Pollution Discharge Elimination System (NPDES) which requires permitting for point discharges of pollutants into surface waters.

Provisions of the CWA allow Indian Nations to be delegated authority to administer CWA Section 402 in Indian Country. The evaluation summarized in this report is intended to provide information that will allow the Lummi Nation to determine if it should seek this delegation at this time or continue to rely on the United States Environmental Protection Agency (EPA) to administer Section 402 of the CWA on the Reservation.

Compliance with Lummi Code of Laws Title 17 and the CWA, including Section 402, is essential to achieve water quality necessary for the purposes of the Reservation as a permanent economically viable homeland of the Lummi people. The Lummi Nation finds that activities on the Reservation which impair the quality of Lummi Nation water could have serious and substantial impacts on the political integrity, economic security, health, and welfare of the Lummi Nation and its members, and all persons present on the Reservation.

This report provides information on developing and implementing a Lummi Nation NPDES Program. A Lummi Nation NPDES program would complement other elements of the CWRMP and include:

- Protection of water sources and prevention of water supply contamination;
- Developing and issuing permits for point discharges, such as wastewater treatment plants and industrial and construction site storm water; and
- Enforcement of point discharge regulations including pretreatment and biosolids disposal.

The purpose of this report is to describe the steps required to seek and obtain authority to administer a NPDES program on the Reservation, to evaluate the costs and benefits of this authority, and to provide a recommended action plan.

Based on this evaluation, the technical staff recommendation is the following:

1. Currently, there are not enough facilities and/or construction activities requiring an NPDES permit to justify the costs associated with seeking delegation and administering a NPDES program.

2. The current delays associated with obtaining NPDES permits from the EPA on the Reservation and for other tribal facilities are not detrimental enough to justify the costs associated with seeking delegation and administering the program.
3. The results of this evaluation should be revisited in five years to determine if changes in conditions justify the costs associated with seeking and administering the program.

1.0 INTRODUCTION

The Lummi Nation Natural Resources Department's (LNR) Water Resources Division established a Comprehensive Water Resources Management Program (CWRMP) in response to Lummi Indian Business Council (LIBC) resolutions 90-88 and 92-43. The purpose of the CWRMP is to ensure that land and water resources on the Lummi Indian Reservation (Reservation) are safeguarded against surface and ground water degradation during planning and development activities.

As a part of the CWRMP, the Lummi Code of Laws Water Resources Protection Code Title 17 (Title 17) was developed to protect, enhance, and restore water quality in the Reservation surface and ground water including the Reservation estuaries and tidelands water. Title 17 Chapter 17.07.010 finds that:

All water that flows through or falls onto the Reservation discharges to resource-rich tidelands and estuaries of the Reservation and/or contributes to aquifer recharge on the Reservation. The estuaries and tidelands of the Reservation (including the overlying waters) support a diverse assemblage of flora, fauna, and habitats such as eelgrass, shellfish, and salmonid rearing areas. The quality of the resources associated with the estuaries and tidelands affects the political integrity, economic security, health, and welfare of the Lummi Nation, as well as subsistence, cultural, commercial, and other uses by tribal members.

Over 95 percent of the potable water supply for the Reservation is currently pumped from ground water wells on the Reservation. Recharge of the aquifers is primarily from local precipitation (i.e., precipitation that falls on or near the Reservation). Where surface waters contribute to aquifer recharge, ground water is susceptible to contamination. Activities occurring on all lands within the Lummi Reservation and the watersheds that discharge to the Reservation have the potential to impair the quality of Reservation waters; impairment of the quality of Reservation waters threatens the economic security, health, and welfare of the Lummi Nation.

Title 17 Chapter 17.07.020 grants rule making authority to the Lummi Natural Resources Commission to:

- Promulgate regulations relating to standards of quality for waters of the Reservation and for substances discharged therein in order to maintain the highest possible standards in accordance with the public policy of the Lummi Nation as declared in 17.07.010;
- Establish water quality standards for surface waters of the Lummi Reservation consistent with all beneficial uses, including public health and public enjoyment; the propagation, protection, and restoration of fish, shellfish, wildlife, and their habitats; and the protection of Reservation waters as cultural, economic and spiritual resources of the Lummi people.

The regulations must also be structured according to requirements under the federal Clean Water Act, 33 U.S.C.A. Sections 1251-1387 (CWA).

The CWA is a federal law that addresses surface water quality protection. The CWA does not directly address ground water or water quantity issues. However, because surface and ground water frequently commingle and water quantity and quality are inextricable, the CWA indirectly addresses both ground water and water quantity. The statute includes a variety of regulatory and non-regulatory programs to reduce direct pollutant discharges into waterways, manage polluted runoff, and finance wastewater treatment facilities.

The 1987 CWA amendment added CWA Section 518 which allows tribes who qualify for “treatment in a manner similar to a state” (frequently referred to as Treatment as a State or TAS) to seek authority to administer sections of the CWA in Indian Country. “Indian Country” is defined in 40 CFR 122.2 as:

- (1) All land within the limits of any Indian reservation under the jurisdiction of the United States Government, notwithstanding the issuance of any patent, and, including rights-of-way running through the reservation;
- (2) All dependent Indian communities with the borders of the United States whether within the originally or subsequently acquired territory thereof, and whether within or without the limits of a state; and
- (3) All Indian allotments, the Indian titles to which have not been extinguished, including rights-of-way running through the same.

In 1990 the Lummi Nation applied for and received TAS status from the EPA for the purpose of funding a comprehensive Water Management Plan for Reservation Waters, including the development of Water Quality Standards, under CWA Section 106. The Lummi Nation was also approved for TAS status for CWA Section 319 in 2002. The Lummi Nation applied to the EPA in 1995 for delegation to administer both CWA Section 303(c), establishing water quality standards, and CWA Section 401, certification that discharges meet the water quality standards. The application for delegation to administer CWA Sections 303(c) and 401 is still pending with the EPA. A draft EPA Finding of Fact is expected late in 2005 or early 2006.

Clean Water Act Section 402 establishes the National Pollution Discharge Elimination System (NPDES), which requires permitting for point discharges of pollutants into surface waters. Currently there are five facilities requiring NPDES permits on the Reservation and Lummi Nation trust lands. All but one of the facilities are operated by the Lummi Nation. In the past there have been considerable administrative delays by the EPA in the issuance or renewal of the facility NPDES permits. These delays result in periods of legal vulnerability for the Lummi Nation and the EPA. Clean Water Act Section 402 also includes regulation of storm water. There are several projects on the Reservation that currently require coverage under the EPA’s NPDES Construction Storm Water General Permit. LNR staff already review Storm Water Pollution Prevention Plans (SWPPPs) under Title 17 Chapter 17.05.020 for small and large construction and land disturbance projects. Small projects, defined in 17.05.030 as land disturbing activities less than one acre, do not require an EPA NPDES Construction Storm Water General Permit coverage. Large projects require both a SWPPP

approved by the Lummi Water Resources Manager and coverage under the EPA NPDES Construction Storm Water General Permit.

Compliance with Lummi Code of Laws Title 17 and the CWA Section 402 is essential to achieve water quality necessary for the purposes of the Reservation as a permanent economically viable homeland of the Lummi people. The Lummi Nation finds that activities on the Reservation which impair the quality of Lummi Nation water could have serious and substantial impacts on the political integrity, economic security, health, and welfare of the Lummi Nation and its members, and all persons present on the Reservation. Dischargers out of compliance with the Lummi Code of Laws Title 17 and/or the CWA could cause adverse impacts.

This report provides information on seeking authority from the EPA to develop and administer a Lummi Nation NPDES Program under CWA Section 402. The purpose of this report is to:

- Describe the steps to seek and obtain delegated authority for enforcing NPDES permits on the Reservation and on other trust lands held by the United States for the exclusive use by the Lummi Nation;
- Evaluate the costs and benefits of delegated CWA Section 402 authority; and
- Provide a recommended action plan.

1.1 WATER RESOURCES ON THE LUMMI RESERVATION

The Lummi Reservation water resources, as described in other documents prepared as part of the Comprehensive Water Resources Management Program (LWRD 1997, LWRD 1998, LWRD 2000, LWRD 2001), are summarized below.

1.1.1 Surface Water

Surface waters on the Reservation include the Nooksack River, the Lummi River, sloughs, small streams, roadside and agricultural ditches, springs, wetlands, estuaries, and marine waters. Short intermittent streams and numerous springs drain the Reservation uplands and surrounding areas. The springs occur both above and below the high tide line. These streams and springs discharge onto tribal tidelands along Bellingham Bay, Portage Bay, Hale Passage, Lummi Bay, Onion Bay, and Georgia Strait, or to the floodplain of the Lummi and Nooksack rivers as shown in Figure 1. The floodplain is drained by a network of agricultural drainage ditches and by the Lummi and Nooksack rivers.

1.1.2 Wetlands

The 1999 comprehensive wetland inventory on the Reservation (Harper 1999) indicated that approximately 43 percent of the Reservation land area is either wetlands or wetland complexes. Approximately 60 percent of these wetlands are located in the Nooksack and Lummi River floodplains (LWRD 2000). The 1999 inventory was developed as a planning tool that may overstate the total wetland area on the Reservation. An inventory update is currently underway to refine the spatial resolution of the wetland mapping, conduct wetland

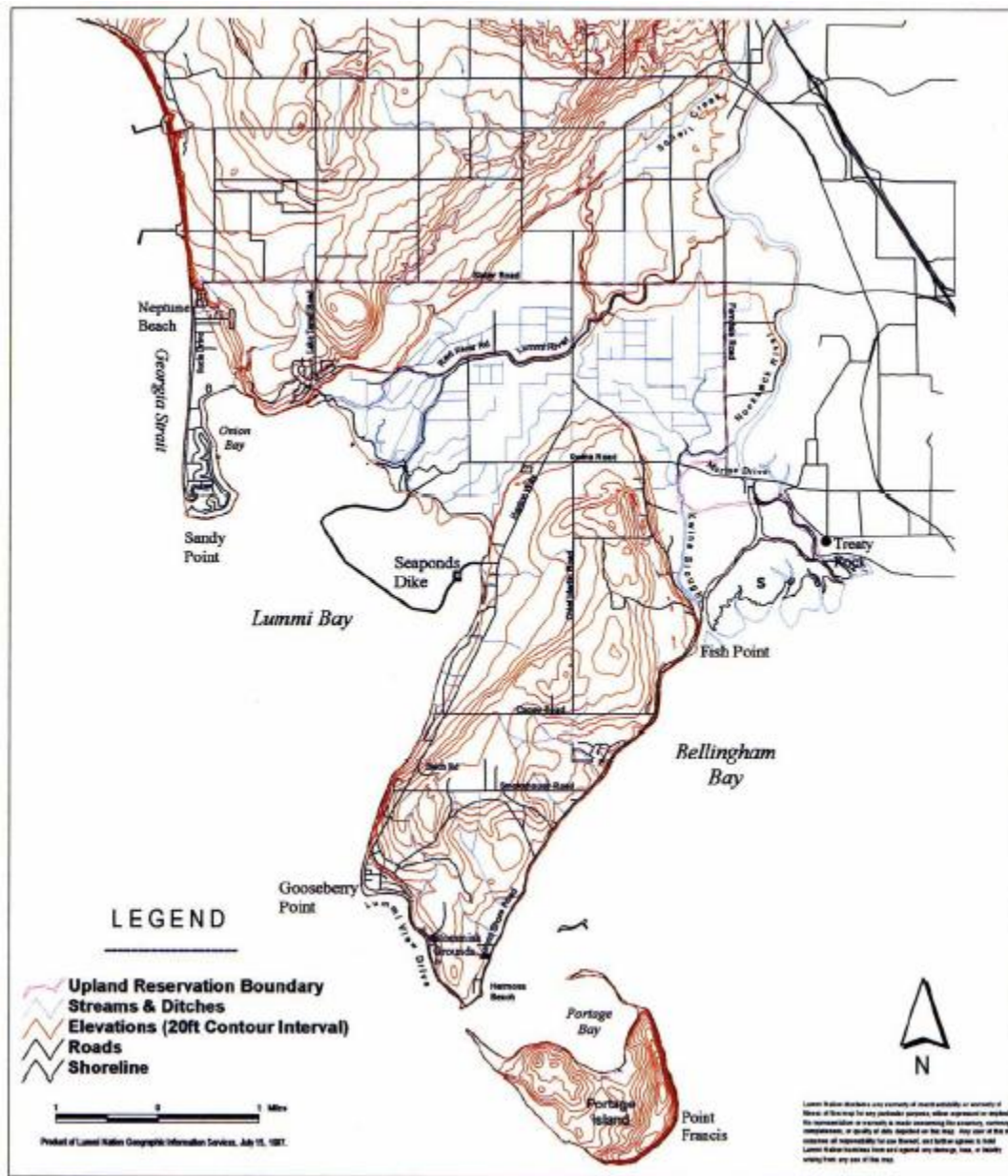


Figure 1. Surface and Marine Water of the Lummi Reservation

function assessments, and to rate the wetlands into one of four categories. Figure 2 shows the most current wetland mapping effort. The Reservation wetlands perform significant functions, including attenuation of storm-water peak flows, water-quality enhancement, aquifer recharge, and aquifer protection from seawater intrusion. They are also valuable for wildlife habitat and the presence of plants with traditional cultural significance. Protection of wetland functions is important for protecting the Reservation water supply and tideland resources.

Most of the once extensive floodplain wetlands of the Lummi and Nooksack rivers have been diked, drained, filled, and cultivated since the late 1800s. Low areas near some of the

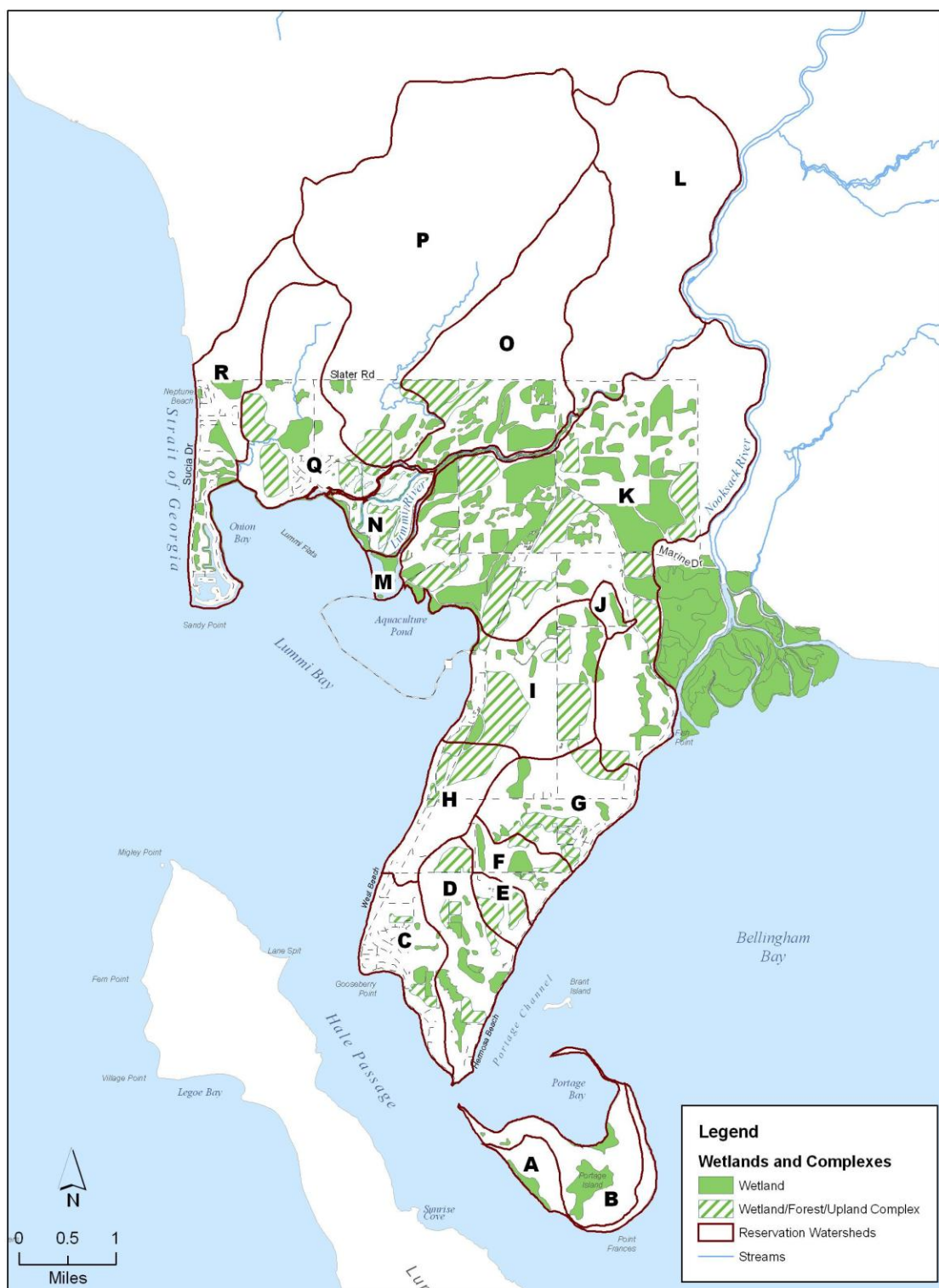


Figure 2. Wetlands of the Lummi Reservation

sloughs still reflect the rich and complex wetland habitat that covered most of the lower floodplain before human alteration. Small estuarine wetlands lie in sheltered, low energy areas along Onion Bay, Neptune Beach, Portage Island, the Lummi River floodplain, the Nooksack River delta, and adjacent to the Seaponds aquaculture dike (see Figure 2).

Road construction and agricultural activity have altered the wetlands that are north of Marine Drive and adjacent to the Nooksack River. South of Marine Drive, many of the wetlands in the Nooksack River delta have been physically altered by the accumulation of sediment at a high rate (Bortelson et al 1981). Remnants of what were once extensive, high-value wetlands are located on the Sandy Point Peninsula between Sucia Drive and the private, non-tribally owned Sandy Point Marina. Further north along Sucia Drive, formerly dry and seasonally wet areas are now permanently flooded as a result of road construction that blocked natural drainage.

The palustrine/estuarine emergent wetlands of the lowlands/floodplains are significant for storm-water attenuation, flood reduction, water-quality enhancement, fish habitat, wildlife habitat, and for plants with traditional cultural importance (LWRD 2000). The estuarine wetlands provide critical juvenile-rearing habitat for migrating salmon, herring, smelt, and other finfish and shellfish. The significance of these wetlands is increasing as wetlands upstream from the Reservation are altered and destroyed. These Reservation wetlands reduce the water-quality impacts of off-Reservation land uses on Lummi commercial, subsistence, and culturally important shellfish beds in Portage and Lummi bays. Protecting and enhancing floodplain and estuarine wetlands is essential to preserving and/or restoring interdependent fish, shellfish, and wildlife habitats.

1.1.3 Ground Water

As a finite resource and the primary source of drinking water on the Reservation, ground water is one of the most important and critical of the Lummi Nation's resources. Aquifer recharge is primarily from local precipitation. Where surface waters contribute to aquifer recharge, ground water is susceptible to contamination. Ground water contamination carries the risk of adversely affecting the health and safety of Reservation residents drinking or using water from this source. Ground water contamination could cause the loss of a primary drinking water source. Activities which may contribute to the contamination of surface waters may contaminate ground water through two related mechanisms: 1) contaminated surface water may contribute to aquifer recharge, and/or 2) infiltration of water (e.g., precipitation) through contaminated ground prior to reaching the aquifer. Over 95 percent of the potable water supply for the Reservation is currently pumped from ground water wells. Ground water contamination could lead to the loss of the primary water supply source for the Reservation because water supply wells are difficult to replace, ground water contamination is very expensive to treat, and some damages to ground water caused by contamination may be impossible or unfeasible to mitigate (LWRD 1997).

1.1.4 Estuarine and Marine Waters

Brackish estuarine waters grade to marine waters of the Reservation in Lummi Bay, Portage Bay, portions of Bellingham Bay and Hale Passage, and the shoreline along Georgia Strait. Saline water moves across tidelands and into the Lummi and Nooksack river channels twice

daily with the tidal cycle. Estuarine waters of the Nooksack and Lummi river deltas form the interface between marine and fresh water. Estuarine waters are important habitat for juvenile and adult salmon as they acclimate to either saline or fresh waters during their seaward and landward migrations, respectively. Economically and culturally important species, such as surf smelt, sand lance, herring, chinook salmon, coho salmon, pink salmon, chum salmon, steelhead, oyster, manila clam, little neck clam, butter clam, horse clam, and dungeness crab use Reservation waters.

Estuaries also serve as habitat for juvenile and adult individuals of many other important aquatic species. The estuaries of the Lummi and Nooksack rivers are a part of a major Pacific Coast flyway for ducks, geese, swans, and shorebirds. These estuaries are also habitat for the threatened bald eagle and formerly listed peregrine falcon.

Much of the Reservation tidelands contain commercial shellfish beds which are vulnerable to contamination by human and/or animal waste and decertification under the National Shellfish Sanitation Program. Decertification of commercial growing areas in Portage Bay has already substantially impacted the economic welfare of the Lummi Nation. In addition, impairment of water quality directly threatens the health of tribal members and the public through consumption of contaminated fish and shellfish. Regulation of the quality of surface waters of the Reservation will protect shellfish beds (as well as other uses and waters) from local sources of contamination.

Lummi Bay tidelands are extensive and rich in resources for tribal commercial, subsistence, cultural uses, and as feeding areas for wildlife. Less extensive tidelands at Gooseberry Point, the Stommish Grounds, and Portage Bay are also important to the tribal economy and culture.

1.2 WATER QUALITY ON THE LUMMI RESERVATION

As described in the Lummi Nation Non-point Source Assessment (LWRD 2001), there are numerous potential non-point sources of pollution on the Reservation. In addition to these potential non-point pollution sources, there are several potential point sources of pollution on the Reservation. Since CWA Section 402 is focused on point sources of pollution, only potential point sources are described below.

1.2.1 Point Source Discharges on the Lummi Reservation

Under the NPDES, all facilities that meet threshold requirements and that discharge pollutants from any point source into “waters of the United States” are required to obtain a permit. Typical point sources include discharges from wastewater treatment plants also known as publicly owned treatment works (POTWs), discharges from industrial facilities, and discharges associated with storm water runoff. Runoff from construction sites is included in the category of storm water associated with industrial activity. Originally, construction activities that disturbed five acres or more required an EPA NPDES permit. However, as of March 10, 2003, construction activities disturbing one or more acres also need permits. The NPDES permit status for facilities and storm water discharges on the Lummi Reservation are shown in Table 1.

Table 1. Point Source Inventory and NPDES Permit Status (EPA 2005c) (EPA 2005g) (Ross 2005) (Freimund 1997)

Point Source	NPDES Status
Facilities	Permit
Gooseberry Point Wastewater Treatment Plant	Current permit WA0025666 expires 5/31/09.
Sandy Point Wastewater Treatment Plant	Current permit WA0025658 expires 5/31/09.
Skookum Creek Fish Production Facility	Permit WA0025208 expired 9/81. Application for a new permit was reportedly submitted in the 1980's and resubmitted in 1998. The EPA Region 10 is developing a General Permit for upland hatcheries (Wilson and Lidgard 2005).
Lummi Bay Sea Ponds Fish Production Facility	Permit WA0025933 has no expiration date listed in the EPA database.
Finkbonner Shellfish	Permit WA0026255 has no expiration date listed in the EPA database.
Sandy Point Fish Hatchery	Exempt from permitting requirements due to small size.
Construction Storm Water	Coverage Under an EPA General Permit WAR10000I
<u>2006- projected</u> <ul style="list-style-type: none"> Housing project, Haas property 	Pending
<u>2005</u> <ul style="list-style-type: none"> NW Indian College (implementation monitoring will extend into 2006) Silver Reef Casino Phase III (implementation monitoring will extend into 2006) NW Reservation Water System Improvements Membrane Bioreactor WWTP (implementation monitoring will extend into 2006) 	NOI filed 6/6/05, Tracking No. WAR10AB4I NOI filed 10/16/05, Tracking No. WAR10AC9I NOI filed 5/4/05, Tracking No. WAR10AB3I NOI filed 9/27/05, Tracking No. WAR10AC7I NOI filed 9/14/05, Tracking No. WAR10AC6I
<u>2004</u> <ul style="list-style-type: none"> Lummi K-12 School (continued into early 2005) Silver Reef Casino Phase II Smokehouse Townhouses (continued into early 2005) 	First NOI filed 1/26/02 terminated 5/13/03 and second NOI filed 5/13/03 terminated 12/31/04. Tracking No. WAR10A18I. NOI filed 8/5/03. Tracking No. WAR10AA6I NOI filed 7/7/04. Tracking No. WAR10AA1I
Municipal Storm Water	
No Reservation facilities currently require permit coverage.	Exempt from permitting requirements due to small population.

Point Source	NPDES Status
Industrial Storm Water	Coverage Under an EPA General Permit WAR05000I
Finkbonner Shellfish	NOI submitted on 9/28/92.
Lummi Auto Recycling	EPA Storm Water General Permit Coverage Notice 2/10/95.
Native American Shellfish Company	NOI submitted on 9/27/92.

The Lummi Water Resources Division assessed various facilities and storm water activities on the Reservation and on the Lummi Nation trust lands for compliance with NPDES permitting during 1996. In several cases, the Lummi Nation had met its duty to apply for a permit, but the EPA had not acted on the applications. For example, the two wastewater treatment plants on the Reservation had NPDES permits when they opened in 1983. The operator applied for a new permit in July 1988, two months after permit expiration. The EPA Region 10 issued permits during 2004, about sixteen years after the applications were submitted. This delayed permitting process reportedly resulted from the EPA's allocation of resources. Although obtaining NPDES permit coverage for the tribal facilities was a tribal priority, the Lummi Nation agreed with EPA Region 10 that developing and monitoring NPDES permits for all facilities in Idaho and Alaska (neither state has been delegated to administer the CWA Section 402 program) and other Federal lands (e.g. military bases) was a higher priority than the two relatively small residential wastewater treatment plants on the Reservation.

The Lummi Nation desires more timely NPDES permitting (Deardorff 2000). At the time of the 1996 assessment, the Lummi Nation informally concluded that due to the small number of tribal facilities that require NPDES permits and the administrative burden associated with administering Section 402, it was not prudent to seek authority at that time. This report more formally revisits this previous determination with consideration of the increasing economic development on the Reservation.

2.0 FEDERAL CLEAN WATER ACT AND THE NPDES PROGRAM

Present federal water pollution programs began with the Federal Water Pollution Control Act of 1948, which focused on protection of human health and allotted funds to state and local governments for water pollution control and protecting water resources, with few, if any, federal goals, objectives, limits, or guidelines (EPA 2002). The Water Quality Act of 1965 required states to develop water quality standards for interstate waters and to develop waste load allocations to quantify pollutant loadings that could be discharged without exceeding the water quality standards. Only about half of the states developed water quality standards by 1971 (EPA 2002).

In November 1972, Congress passed the Federal Water Pollution Control Act (WPCA) Amendments of 1972. The Amendments maintained the requirements for water quality-based controls, but added an equal emphasis on technology-based, or end-of-pipe, control strategies (EPA 2002). The WPCA Amendments set national goals including:

- The elimination of discharge of pollutants into navigable waters by 1985;
- An interim goal of water quality which provides for the protection and propagation of fish, shellfish, and wildlife, and provides for recreation be achieved by July 1, 1983; and
- The discharge of toxic pollutants in toxic amounts be prohibited (EPA 2002).

Title IV of the WPCA created the system for permitting wastewater discharges (Section 402), known as the National Pollutant Discharge Elimination System (NPDES). Under the NPDES, all facilities that meet the size threshold requirements and that discharge pollutants from any point source into waters of the United States are required to obtain a permit. Permits address technology-based limits (based on the ability of dischargers in the same category to treat wastewater) and water quality-based limits (when technology-based limits are not sufficient to provide protection of the water body).

The EPA tried to set nationally uniform effluent limits for removal of regulated pollutants. However, all of the guidelines were not in place when the first set of permits was developed from 1973-1976 (EPA 2002). Because the EPA did not establish industry limits or effluent guideline within the statutory limit, the Natural Resources Defense Council (NRDC) sued the EPA resulting in a court supervised "consent decree" in 1976 identifying:

- Toxic priority pollutants to be controlled,
- Primary industries for technology-based control, and
- Methods for regulating toxic discharges through the authorities of the WPCA Amendments (EPA 2002).

The provisions of the consent decree were incorporated into the framework of the 1977 Amendments, formally known as the Clean Water Act (CWA). The CWA recognized that the technology-based limits were not able to prevent the discharge of toxic substances in toxic amounts in all waterways (EPA 2002). Therefore, the EPA initiated a national policy in February 1984 to control toxics based on a water quality approach. Congress then amended the CWA with the Water Quality Act (WQA) of 1987, which outlined a strategy to accomplish the goal of meeting water quality standards set by states (EPA 2002). The 1987

WQA established new schedules for industrial and municipal storm water discharges to be regulated by NPDES permits. Discharges from municipal separate storm sewer systems (MS4s) were required to have controls to reduce pollutant discharges to the "maximum extent practicable" (EPA 2002). In addition, the WQA required the EPA to establish numeric limits to control toxics in sewage sludge. Relevant sections of the CWA are:

Title III – Standards and Enforcement

- Section 301 Effluent Limitations
- Section 302 Water Quality-Related Effluent Limitations
- Section 303 Water Quality Standards and Implementation Plans
- Section 304 Information and Guidelines [Effluent]
- Section 305 Water Quality Inventory
- Section 306 National Standards of Performance
- Section 307 Toxic and Pretreatment Effluent Standards
- Section 308 Inspections, Monitoring, and Entry
- Section 309 Federal Enforcement

Title IV – Permits and Licenses

- Section 401 Requiring Federal Agencies to Obtain State [Tribal] Certification that a Discharge Will Not Increase Pollutant Loads to a Waterbody
- Section 402 National Pollutant Discharge Elimination System (NPDES)
- Section 405 Disposal of Sewage Sludge

Title V – General Provisions

- Section 501 Administration
- Section 502 Definitions
- Section 510 State Authority
- Section 518 Indian Tribes

The primary federal regulations to implement the NPDES program of CWA Section 402 are found in 40 Code of Federal Regulations (CFR) listed below.

- 40 CFR Part 122 (NPDES permitting)
- 40 CFR Part 123 (state [tribal] program requirements)
- 40 CFR Part 124 (procedures for decision making)
- 40 CFR Part 125 (technology-based standards)
- 40 CFR Part 129 (toxic pollutant standards)
- 40 CFR Part 130 (water quality management plans)
- 40 CFR Part 131 (water quality-based standards)
- 40 CFR Part 133 (sewage secondary treatment regulations)
- 40 CFR Part 135 (citizen suits)
- 40 CFR Part 136 (analytical procedures)
- 40 CFR Part 257 (state sludge disposal regulations)
- 40 CFR Part 401 (general effluent guidelines provisions)
- 40 CFR Part 403 (general pretreatment regulations)
- 40 CFR Parts 405-471 (effluent limitations guidelines)
- 40 CFR Part 501 (state sludge permitting requirements)
- 40 CFR Part 503 (sewage sludge disposal standards)

2.1 SCOPE OF THE NPDES PROGRAM

The scope of the NPDES Program is described below in sections including key definitions used in the program and a summary of the NPDES Program areas.

2.1.1 NPDES Program Key Definitions

Under the NPDES Program, all facilities that meet certain size thresholds and that discharge pollutants from any point source into waters of the United States are required to obtain an NPDES permit. The term “pollutant” is defined broadly by the NPDES regulations and litigation and includes any type of industrial, municipal, and agricultural waste discharged into water. For regulatory purposes, pollutants have been grouped into three general categories: conventional, toxic, and non-conventional (EPA 2002).

Conventional Pollutants

CWA Section 304(a)(4) designated the following as conventional pollutants:

- Five day biochemical oxygen demand (BOD5),
- Total suspended solids (TSS),
- pH,
- Fecal coliform, and
- Oil and grease (O&G) (added in 1979 in 40 CFR 401.16).

Toxic Pollutants

CWA Section 307(a)(1) requires the establishment of a list of toxic priority pollutants listed in 40 CFR 401.15. These include metals and manmade organic compounds. This list now includes over 100 pollutants.

Non-Conventional Pollutants

Non-conventional pollutants are those which do not fall under either of the above categories, and include such parameters as ammonia, nitrogen, phosphorus, chemical oxygen demand (COD), and whole effluent toxicity (WET).

Waters of the United States and Lummi Nation

The EPA defines the term “waters of the United States” to include (EPA 2002):

- Navigable waters and their tributaries,
- Interstate waters, and
- Intrastate lakes, rivers, and streams which are:
 - used by interstate travelers for recreation and other purposes;
 - sources of fish or shellfish sold in interstate commerce; or
 - utilized for industrial purposes by industries engaged in interstate commerce.

The intent of this definition is to cover all possible waters within federal jurisdiction under the Commerce Clause of the Constitution (EPA 2002). The definition has been interpreted to include virtually all surface waters in the United States, including wetlands and ephemeral streams (EPA 2002). Generally, ground water is not considered a water of the United States. Therefore, discharges to ground water are not subject to NPDES requirements. If, however, there is a discharge to ground water that is hydraulically connected to surface water, the discharger may be required to apply for an NPDES permit because the discharge is then

considered a water of the United States (EPA 2002). States or tribes may choose to require NPDES permits for discharges to ground water where jurisdiction over groundwater resources is maintained by the state or tribe (EPA 2002).

Title 17 (17.09.010) of the Lummi Code of Laws defines “Lummi Nation Water” as:

- All fresh and marine waters that originate or flow in, into, or through the Reservation, or that are stored on the Reservation, whether found on the surface of the earth or underground and
- All Lummi Nation tribal reserved water rights.

Typical Point Discharges

Typical point source discharges include discharges from publicly owned treatment works (POTWs), industrial facilities, and discharges associated with storm water runoff. A wide variety of manmade conveyances are considered point sources, including pipes, ditches, channels, tunnels, certain kinds of ships, and offshore oil rigs. NPDES permits cover industrial and municipal discharges, discharges from storm sewer systems in larger cities, storm water associated with numerous kinds of industrial activity, runoff from construction sites disturbing more than one acre, mining operations, and animal feedlots and aquaculture facilities above certain size thresholds (EPA 2002).

Point source discharges may be direct and indirect. Direct sources discharge wastewater directly into the receiving water body, while indirect sources discharge wastewater to a POTW, which in turn discharges into the receiving water body. The NPDES permits are issued to operators of facilities that are direct point source discharges. The National Pretreatment Program addresses industrial and commercial indirect dischargers.

Exemptions

A number of types of discharges that meet the definition of a “point” source are not required to obtain an NPDES permit because of either statutory or administrative exemptions. These include the following:

- Abandoned mines on nonfederal lands (state, local, private).
- Sewage (not other types of discharges) from ships covered by EPA’s Vessel Sewage Discharge Program.
- Return flows from irrigated agriculture.
- Most drainage ditches associated with logging roads.
- Most smaller feedlots and aquaculture facilities (EPA Watershed Academy 2005).

2.1.2 NPDES Program Areas

The NPDES Permitting Program focuses on the development of effluent limits and conditions for the discharge of treated effluent. There are additional programs listed in Table 4 that incorporate other control measures to address certain types and categories of discharges that may be present at municipal and industrial facilities and sites.

Table 2. Discharge Source, NPDES Program Areas, and Applicable Code of Federal Regulations (CFR) (EPA 1996)

Source	Activity	Program Areas	Applicable Regulations
Municipal	Municipal Effluent Discharge	NPDES Point Source Control Program	40 CFR 122 40 CFR 125 40 CFR 133
	Indirect Industrial/Commercial Discharges	Pretreatment Program	40 CFR 122 40 CFR 403 40 CFR 405-499
	Municipal Sludge Use and Disposal	Municipal Sewage Sludge Program	40 CFR 122 40 CFR 257 40 CFR 501 40 CFR 503
	Combined Sewer Overflow (CSO) Discharges	CSO Control Program	40 CFR 122 40 CFR 125
	Storm Water Discharges (Municipal)	Storm Water Program	40 CFR 122 40 CFR 125
Industrial	Process Wastewater Discharges	NPDES Point Source Control Program	40 CFR 122 40 CFR 125 40 CFR 405-499
	Non-process Wastewater Discharges	NPDES Point Source Control Program	40 CFR 122 40 CFR 125
	Storm Water Discharges (Industrial)	Storm Water Program	40 CFR 122 40 CFR 125

2.1.3 Municipal Programs

Specific NPDES program areas applicable to municipal sources are: the NPDES Point Source Control Program, the National Pretreatment Program, the Municipal Sewage Sludge Program, Combined Sewer Overflows (CSOs), and the Municipal Storm Water Program.

Municipal Point Sources

Municipal point sources include POTWs that receive primarily domestic sewage from residential, commercial, and industrial customers. The treatment provided by POTWs typically includes (EPA 2002): physical separation and settling (e.g., screening, grit removal, primary settling), biological treatment (e.g., trickling filters, activated sludge), and disinfection (e.g., chlorination, UV, ozone). These processes produce the treated effluent (wastewater) and biosolids (sludge) residual, which is regulated under the Municipal Sewage Sludge Program.

Pretreatment

Pretreatment is the reduction, elimination, or alteration of pollutants in wastewater prior to discharging the pollutants into a POTW. The reduction or alteration may be obtained by physical, chemical, or biological processes, or by other means. Typical pretreatment technology includes equipment, such as equalization tanks or facilities, for protection against surges or slug loadings that might interfere with or be incompatible with the POTW (EPA 1999).

The intent of the National Pretreatment Program is to control pollutants which pass through or interfere with treatment processes in POTWs or which may contaminate sewage sludge. The Pretreatment Regulations apply to all non-domestic sources which introduce pollutants into a POTW. These sources of “indirect discharge” are referred to as industrial users (IUs). Industrial users range from a coin operated car wash to a synthetic chemical producer (EPA 1999). Therefore, the EPA developed four criteria to define a Significant Industrial User (SIU). These four criteria are as follows:

- Discharges an average of 25,000 gallons per day or more of process wastewater to the POTW;
- Contributes a process waste stream making up five percent or more of the average dry weather hydraulic or organic capacity of the POTW treatment plant;
- Designated by the POTW because of its reasonable potential to adversely affect the POTW's operation or violate any pretreatment standard or requirement; or
- Subject to Federal categorical pretreatment standards (EPA 1999).

Pretreatment regulations (40 CFR 403.8(a) state that any POTW (or combination of treatment plants operated by the same authority) with a total design flow greater than 5 million gallons per day (MGD) and smaller POTWs with SIUs must establish a local pretreatment program. States [Tribes] have the authority to implement POTW pretreatment programs in lieu of POTWs as provided in 40 CFR 403.10(e).

Clean Water Act Section 402(b) (1A) requires that issued NPDES permits ensure compliance with CWA Section 307- Toxic and Pretreatment Standards. Clean Water Act Section 402 (b)(2A)(8) states that any permit for a discharge from a POTW includes conditions to require the identification of the character and volume of pollutants of any source introducing pollutants subject to pretreatment standards and a program to assure compliance with such pretreatment standards. A POTW's NPDES permit is conditioned to require development of an approved POTW pretreatment program that must include legal authority, procedures, local limits to pollutants, funding, and enforcement to ensure compliance with pretreatment by all industrial dischargers to the POTW (EPA 1999). In the current permit, the LTSD is not required to have a formal pretreatment program, but must notify the EPA of any new introduction of pollutants from indirect dischargers (McCourt 2005).

Municipal Sewage Sludge

Clean Water Act Section 405 requires that all NPDES permits issued to POTWs and other Treatment Works Treating Domestic Sewage (TWTDS) contain conditions implementing 40 CFR Part 503 Standards for the Use and Disposal of Sewage Sludge, unless such requirements have been included in a permit issued under the appropriate provisions of

subtitle C of the Solid Waste Disposal Act, part C of the Safe Drinking Water Act, the Marine Protection, Research, and Sanctuaries Act of 1972, the Clean Air Act, or under State permit programs approved by the Administrator. A TWTDS includes sewage sludge (also known as biosolids) incinerators, sewage sludge surface disposal sites, and facilities that do not discharge to waters of the United States (sludge-only facilities such as sludge composting facilities that treat sewage sludge).

The EPA sludge regulations focus on toxics, pathogens, and “vectors” (flies, mosquitoes, rodents, and other carriers of disease). Sewage sludge can be disposed of in landfills and/or lagoons, incinerated, or land applied to serve as a soil enhancer or fertilizer. Land application of treated sewage sludge occurs on parks, golf courses, abandoned mines, forested sites, and for construction site restoration. It can also be applied to crops, including crops for human consumption (EPA Watershed Academy 2005). Sludge from the two POTWs on the Lummi Reservation is currently land applied to a forested biosolids application site.

Combined Sewer Overflows

Some older POTWs have combined sewer overflow (CSO) systems that can release untreated effluent during storm events. A combined sewer system is one that, by design and by function, carries both sewage and storm water. During dry weather these systems carry all sewage flows to the wastewater treatment plant. During periods of rainfall or snow melt, the carrying capacity of the sewer collection system may be exceeded, causing a combined sewer overflow at relief points designed into the sewer system (EPA Watershed Academy 2005). Overflow discharges from combined systems contain not only storm water but also untreated human and industrial waste, oil and grease, metals, sediments, and floating debris (EPA Watershed Academy 2005). There are no CSOs on the Reservation and none are expected in the future.

Municipal Storm Water

Municipal separate storm sewer systems (MS4s) have separate collection and discharge lines, one set for the storm water and another set for sewage. NPDES permits are required for MS4s (serving a population greater than 10,000 in an area with population density of at least 1000 people per square mile) that discharge to surface waters since they are point source discharges of water mixed with various pollutants such as oil and grease, metals, pesticides, pathogens, sediment and nutrients (EPA Watershed Academy 2005). Because MS4/CSO systems often have large numbers of outfalls (discharge points), permits for such systems do not usually address outfalls individually (EPA Watershed Academy 2005). Rather, one permit is issued covering all the outfalls in a city’s CSO or MS4.

Because experience with treating pollutants in wet weather-dependent urban discharges is limited and because the volume of wastewater being dealt with varies greatly, relatively few reliable and cost-effective treatment methods are available (EPA Watershed Academy 2005). It is difficult to predict what treatment levels can be achieved on a regular basis. Consequently, pollutant by-pollutant end-of-pipe discharge limits are the exception rather than the rule in NPDES permits for MS4s and CSOs. Instead, there are requirements for installation of certain types of structural devices or employment of various management strategies. Currently, there are no NPDES Municipal Storm Water permits on the Reservation.

2.1.4 Industrial Sources

Specific NPDES program areas applicable to industrial sources are: Process and Non-process Wastewater Discharges and Industrial Storm Water Discharges.

Industrial Process and Non-Process Wastewater

Pollutants discharged directly to surface water at industrial facilities vary widely and are dependent on the type of industry and specific facility characteristics such as the types of raw materials, production processes, and treatment technologies utilized (EPA 1996). There may also be non-process wastewater discharges such as non-contact cooling water. Residuals (sludge) generated by industrial facilities are not currently regulated by the federal NPDES Program (EPA 1996).

Industrial Storm Water

Industrial facilities may also have storm water discharges contaminated by manufacturing activities, contact with raw materials, or product storage activities. Operators of industrial facilities in the eleven categories listed below need an NPDES permit if the storm water is discharged directly to surface water or goes into a MS4 (EPA 1996).

Industrial Storm Water Categories Requiring NPDES Permits

- Facilities with storm water effluent limits
- Manufacturing facilities
- Mineral, metal, oil, gas operations
- Hazardous waste facilities
- Steam electric power generating plants
- Recycling facilities including salvage yards and automobile junkyards
- Transportation facilities including vehicle maintenance and cleaning shops
- Wastewater treatment works
- Landfills and land application sites
- Light industry facilities
- Construction sites one or more acres

At a minimum, permits require development of a site-specific Storm Water Pollution Prevention Plan (SWPPP), covering both the construction and the post-construction phases of the project. A SWPPP must include a site description, a map identifying sources of storm water discharges on the site, anticipated drainage patterns after major grading, areas where major structural and nonstructural measures will be employed, surface waters including wetlands, and locations of discharge points to surface waters. The SWPPP also describes measures that will be used to protect existing vegetation wherever possible and stabilize disturbed areas no more than fourteen days after construction activity has ceased.

2.2 NPDES PERMITTING PROCESS

A permit is a license for a facility to discharge a specified amount of a pollutant into a

receiving water under certain conditions or it authorizes facilities to process, incinerate, landfill, or beneficially use sewage sludge. The two basic types of NPDES permits issued are individual and general permits.

An individual permit is a permit specifically tailored to an individual facility. In principle, once a facility submits the appropriate application 180 days prior to discharge, the permitting authority develops a permit for that particular facility based on the information contained in the permit application (e.g., type of activity, nature of discharge, receiving water quality). The authority issues the permit to the facility for a specific time period (not to exceed five years) with a requirement that the facility reapply 180 days prior to the expiration date.

A general permit covers multiple facilities (typically numerous small sources) within a specific category. The more complex the discharge, the more likely an individual permit will be required. Once the general permit is issued, any dischargers with plans to meet the general permit criteria can submit a Notice of Intent (NOI) to the permitting authority requesting coverage and agreeing to comply with the conditions in the permit. The permitting authority can then grant coverage or require the facility to apply for an individual permit.

2.2.1 Major Components of a Permit

All NPDES permits, at a minimum, consist of five general sections (EPA 2002):

1. Cover Page - A NPDES permit cover page includes the name and location of the permittee and permitting authority, statutory and regulatory authorities, effective/expiration dates, special conditions (e.g., studies, compliance schedules), the specific locations for which a discharge is authorized, and standard conditions.

2. Effluent Limits - After deriving technology-based effluent limits, the permit writer derives effluent limits that are protective of applicable state or tribal water quality standards. The permit writer then compares the technology-based effluent limits with the water quality-based effluent limits and applies the more stringent limits in the permit. It is possible that a permit may have limits that are technology-based for some parameters and water quality-based for others. For example, a permit may contain an effluent limit for TSS based on national effluent limit guidelines (technology-based), a limit for ammonia based on prevention of aquatic toxicity (water quality-based), and a BOD5 limit based for part of the year on effluent limit guidelines (technology-based) and for the remainder of the year on water quality considerations. Limits are often expressed as concentrations, combined with allowed volumes of discharge. Limits must be expressed in such a way that they cannot be met simply by diluting the facility's effluents with clean water just before discharge into the receiving water. Effluent limits are performance standards.

3. Monitoring and Reporting Requirements - Most individual NPDES permits include detailed requirements that specify what pollutants the permittee must monitor in their discharge, how frequently to monitor, and what sampling and analytic techniques should be used. Some facilities are also required to sample and analyze the waters into which they discharge. The permittee must retain records for all

monitoring information (which includes maintenance and calibration records, strip charts, reports, etc.) for at least three years from the date of sampling (sewage sludge data must be maintained for five years). Permittees are required to submit Discharge Monitoring Reports, usually monthly. If the monitoring demonstrates noncompliance, then the data can be used as the basis for an enforcement action. Monitoring may also serve to provide data about treatment efficiency and to characterize effluents for permit re-issuance. The majority of discharge data from NPDES facilities are collected by the permittees themselves, although EPA, the state, or tribe can also conduct compliance monitoring. General permits often have few, if any, monitoring or reporting requirements.

4. Special Conditions – Special conditions supplement effluent limit guidelines. Examples include: best management practices (BMPs), additional monitoring activities, ambient stream surveys, and toxicity reduction evaluations (TREs). A NPDES permit can require the use of certain structural or non-structural BMPs. For municipal wastewater plants and industrial facilities, BMPs are supplemental to end-of-pipe performance standards. If meeting the effluent limits requires upgrading treatment processes, permits can include a compliance schedule. Such schedules usually include interim milestones, such as dates for onset of construction, and a final date upon which effluent limits must be achieved.

5. Standard Conditions - All NPDES permits include a standard set of conditions or clauses that delineate the legal, administrative, and procedural requirements of the permit, including provisions for reopening the permit to changes, authority to revoke the permit for cause, and authority to enter the facility and perform inspections.

2.2.2 NPDES Permit Processing and Review

Individual Permit Process

As summarized in Figure 3, there are multiple steps in the individual permit process. The regulatory authority must include an explanation (fact sheet) of how the discharge limits were derived in the draft individual permit. After the draft individual permit is complete, the permitting authority provides an opportunity for public participation in the permit process. A public notice announces the permit and interested parties may submit comments regarding the draft permit. Based on the comments, the permitting authority then develops the final permit, documenting the process and decisions for the administrative record, and issues the final permit to the facility.

General Permit Process

General permits may offer a cost-effective option for permitting agencies because a large number of facilities can be covered under a single permit (EPA 2002). By issuing general permits, the permitting authority can allocate resources in a more efficient manner to provide timelier permit coverage (EPA 2002). For example, a large number of facilities that have certain elements in common may be covered under a general permit without expending the time and money necessary to issue an individual permit to each of these facilities. In

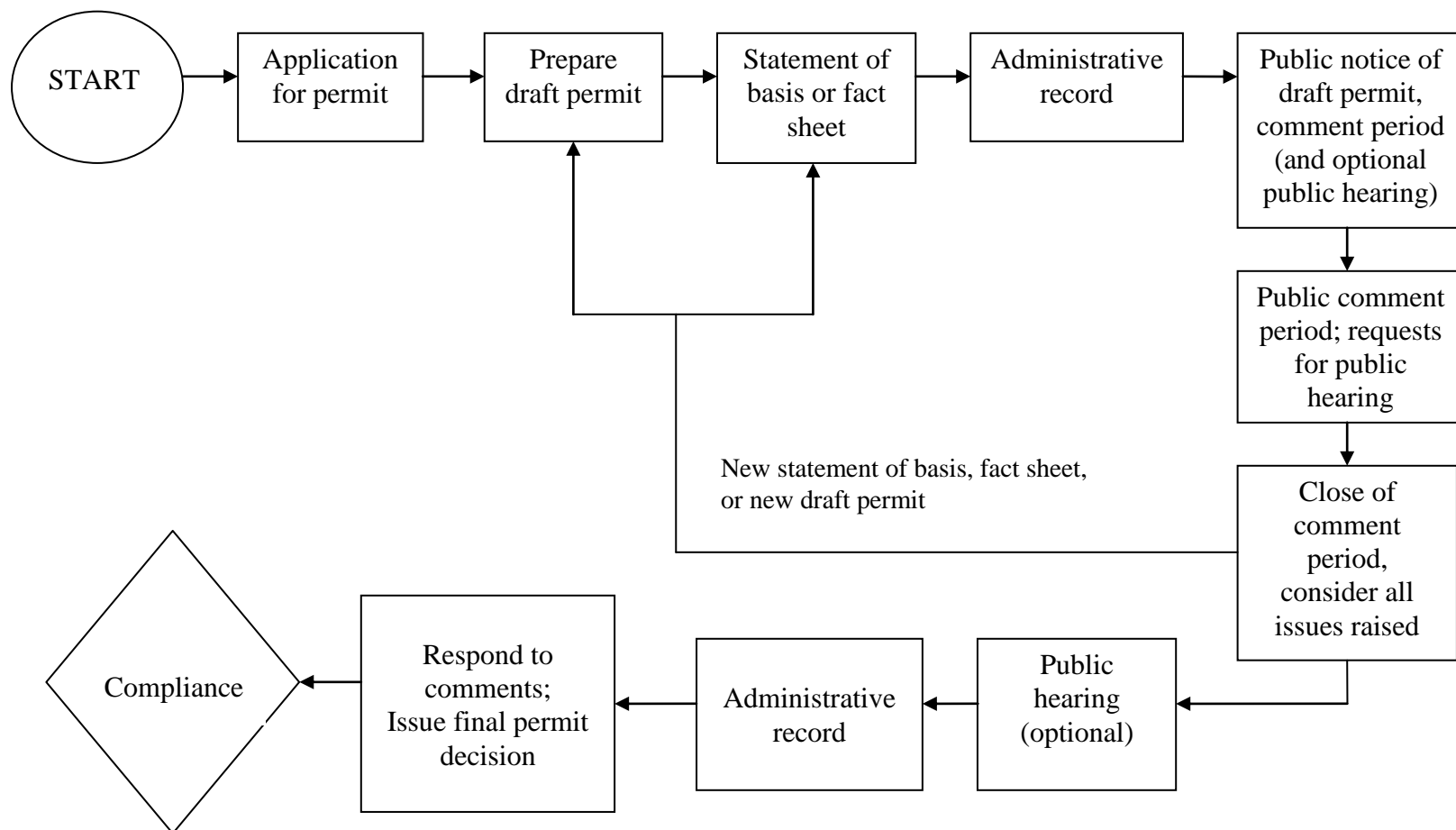


Figure 3. NPDES Permitting Process

addition, using a general permit ensures consistency of permit conditions for similar facilities.

NPDES regulations in 40 CFR 122.28 state that general permits may be written to cover categories of point sources having common elements, such as:

- Storm water point sources;
- Facilities that involve the same or substantially similar types of operations;
- Facilities that discharge the same types of wastes or engage in the same types of sludge use or disposal practices;
- Facilities that require the same effluent limits, operating conditions, or standards for sewage sludge use or disposal; and
- Facilities that require the same or similar monitoring.

General permits, however, may only be issued by the permitting authority to dischargers within a specific geographical area such as city, county, state, or Reservation political boundaries; designated planning areas; sewer districts or sewer authorities; or urbanized areas (EPA 2002).

The permitting authority first identifies the need for a general permit by collecting data demonstrating that a group, or category, of dischargers has similarities that warrant a general permit. The remaining steps of the general permit process are the same as for individual permits. The permitting authority develops the draft permit and fact sheet, issues a public notice, addresses public comments, documents the issues for the administrative record, and issues the final permit. After the general permit has been issued, facilities that are required to be covered under the general permit generally submit a Notice of Intent (NOI) to the permitting authority. The permitting authority may then either request additional information describing the facility, notify the facility that the general permit covers it, or require the facility to apply for an individual permit.

2.2.3 NPDES Permit Violations and Enforcement

Violations

Violations include discharging without having obtained either an NPDES individual permit or obtained coverage under a general permit, exceeding the pollutant discharge levels set forth in the NPDES permit, failure to comply with monitoring and reporting requirements, and failure to comply with the compliance schedule or interim milestones in the permit (EPA 2002). Permittees are required to notify the NPDES authority when they realize they have failed to comply with one or more of the permit conditions. Typically, NPDES agencies also conduct periodic compliance inspections of permitted facilities.

Enforcement

The EPA, state, or tribal NPDES program promotes compliance assistance, which helps permittees achieve and remain in compliance with their permit, rather than immediately initiating enforcement actions. Enforcement actions can include the following (EPA 2002):

- Compliance Agreements, Compliance Orders, and Injunctions;

- Fines for typical violations (exceed permit limits, failure to report);
- Imprisonment for criminal violations (repeated, willful violations);
- Supplemental environmental projects (SEP).

With a SEP, instead of simply paying a fine to the federal, state, or tribal treasury, the violator must spend more money than the amount of the fine on a relevant environmental project, such as wetlands restoration or abandoned mine cleanup (EPA 2002). Citizens can also bring a lawsuit against a violator, but they must provide a 60-day notice to the EPA and the state or tribe to give them time to take action against the violator.

2.3 ROLES AND RESPONSIBILITIES OF FEDERAL, STATE, AND TRIBAL AUTHORITIES

The EPA is authorized under the CWA to directly implement the NPDES Program. The EPA, however, may authorize a state (CWA Section 510) or a tribe (CWA Section 518) to implement all or parts of the national program. Current roles and responsibilities are described in the following sections.

2.3.1 EPA Region 10 NPDES Program

In the EPA Region 10, only Washington and Oregon have been delegated authority from the EPA to administer NPDES permitting. As a result, EPA Region 10 has direct implementation responsibilities for all dischargers in Idaho and Alaska, as well as all federal facilities in Washington, Oregon, Idaho, and Alaska. The State of Alaska is currently applying for delegated authority (Wilson and Lidgard 2005).

EPA General Permits Applicable in Washington State

The EPA has issued a Construction Storm Water General Permit (CGP) that covers Indian Country in Washington State, Permit Number WAR10000I (EPA 2005d). A full copy of the CGP permit can be found at http://www.epa.gov/npdes/pubs/cgp2003_entirepermit.pdf. The permit covers any construction site with land disturbing activities of one acre or more, including smaller sites that are part of a larger common plan of development or sale.

There is also a Federal EPA Multi-Sector General Permit for Storm Water Discharges Associated with Industrial Activities (MSGP-2000) that cover facilities located in Indian Country (Permit Number WAR05000I) and federal facilities in Washington (Permit Number WAR05000F). Permit coverage is required for industrial facilities that have specific Standard Industrial Classification (SIC) codes listed in 40 CFR 122.26(b)(14), if they have a discharge of storm water from their industrial areas to a receiving water, or to storm drains that discharge to a receiving water. Regardless of the SIC code, some industries may be required to seek permit coverage for areas of their industrial site that have a potential or are causing an impact to receiving waters (EPA 2005a). No NPDES permit is required if all the storm water is treated and retained on site (discharge to ground), although other permits from other federal, state, or tribal programs may be required (e.g., underground injection control permits

under the Safe Drinking Water Act). Discharges of all storm water to a combined sewer (which goes to the wastewater treatment plant), are not required to apply for coverage. The MSGP-2000, issued in October 2000, expired on October 30, 2005. EPA is seeking comments on the proposed new permit through January 16, 2006. Facilities that obtained coverage under MSGP-2000 prior to its expiration are automatically granted an administrative continuance of permit coverage. The administrative continuance will remain in effect until a new permit is issued. Those facilities already covered under MSGP-2000 must continue to implement their stormwater pollution prevention plans (SWPPPs) and comply with all requirements in the permit (EPA 2005f). Facilities that did not obtain coverage under the MSGP-2000 prior to its expiration will not have general permit coverage available until a new permit is issued. The EPA expects a new Multi-Sector General Permit to be finalized in early 2006 (EPA 2005f). More information about this permit is posted at <http://cfpub2.epa.gov/npdes/stormwater/msgp.cfm>. Electronic Storm Water NOIs can be filed at <http://cfpub.epa.gov/npdes/stormwater/enoi.cfm>. All EPA Storm water NOI's can be searched at <http://cfpub.epa.gov/npdes/stormwater/noi/noisearch.cfm>.

Municipal Storm Water

The EPA storm water regulations established two phases for the storm water permit program. In Phase I, the EPA Region 10 issued individual municipal storm water permits to discharges from medium and large MS4s (serving populations greater than 100,000), construction activities of five acres or larger (or less than five acres if part of a common plan of development or sale), and industrial activities.

On October 29, 1999, the final Phase II storm water regulations were signed into rule by the EPA. The Phase II regulations expand the requirement for storm water permits to all municipalities located in urbanized areas (as defined by the U.S. Census Bureau) and to construction sites between one and less than five acres. In Phase II, the EPA must evaluate MS4s in those areas with a population of 10,000 people and a population density of at least 1,000 people per square mile to determine if permits are necessary for some or all of these MS4 systems.

The EPA Region 10's "Designation Criteria for Small Municipal Separate Storm Sewer Systems June 2002" outlines the EPA Region 10 criteria and process for designating MS4s outside urban areas for inclusion in the NPDES storm water permitting program (EPA R10 2002). There are no candidate areas on the Reservation that meet both the population and the density threshold for small MS4s described above. No portion of the Reservation is included in the Bellingham or Ferndale "urbanized areas" (EPA 2005b).

The EPA Region 10 has chosen to develop individual permits for Phase II MS4s instead of a NPDES general permit as described in the Phase II regulations for the following reasons (EPA R10 2005):

- 1) To include specific requirements for waterbodies already impaired by various pollutants or with Total Maximum Daily Load (TMDLs) requirements as appropriate.
- 2) To allow for specific requirements of consultations with the National Marine

Fisheries Service and the U.S. Fish and Wildlife Service regarding impacts of the permit decision on endangered species to be included as appropriate for the waterbody and species in question.

3) To allow the EPA to consult on particular topics of concern with interested tribes and meet their Government-to-Government obligation as necessary.

4) To comply with a decision from the 9th Circuit Court of Appeals (*Environmental Defense Center, et. al. v. EPA*, September 15, 2003) that determined that the EPA's Phase II recommendation that NPDES permitting authorities use general permits to regulate municipal storm water discharges violated various provisions of the CWA regarding public review and public hearings in the permitting process.

2.3.2 State of Washington NPDES Program

In 1973 the State of Washington received authority from the EPA to implement the full NPDES Program, except for permits in Indian Country or for federal facilities. There are no state issued NPDES permits on the Reservation (Ecology 2005d). The state's authority is primarily codified in RCW 90.48 and relevant regulations are found in:

Ch. 173–200 WAC - Water quality standards for ground waters of the state of Washington

Ch. 173–201A WAC - Water quality standards for surface waters of the state of Washington

Ch. 173-204 WAC - Sediment management standards

Ch. 173–205 WAC - Whole effluent toxicity testing and limits

Ch. 173–208 WAC - Grant of authority sewerage systems

Ch. 173–216 WAC - State waste discharge permit program (rule under revision)

Ch. 173–218 WAC - Underground injection control program (rule under revision)

Ch. 173–220 WAC - National pollutant discharge elimination system permit program

Ch. 173–221 WAC - Discharge standards and procedures for determining effluent limitations
for domestic wastewater facilities

Ch. 173–221A WAC - Wastewater discharge standards and effluent limitations

Ch. 173–224 WAC - Wastewater discharge permit fees

Ch. 173–225 WAC - FWPCA—establishment of implementation procedures of application
for certification

Ch. 173–226 WAC - Waste discharge general permit program (rule under revision)

Ch. 173–230 WAC - Certification of operators of wastewater treatment plants

Ch. 173–240 WAC - Submission of plans and reports for construction of wastewater
facilities

Ch. 173–245 WAC - Submission of plans and reports for construction and operation of
combined sewer overflow reduction facilities

Ch. 372–52 WAC - Water districts requests for approvals and certifications of necessity to
operate sewer districts

Ch. 372–68 WAC - Water pollution control and abatement plans for sewage drainage basins

Ch. 173–308 WAC - Biosolids Management

The State Department of Ecology (Ecology) issues individual facility NPDES permits to facilities under their jurisdiction, with 130 dischargers located Whatcom County in 2005 (Ecology 2005d). Ecology has also issued several general permits described below.

Ecology Municipal Storm Water General Permits

Original Phase I NPDES Municipal Storm Water permits were issued by Ecology in 1995. In August 2005, Ecology issued a preliminary draft (renewal) of a Phase I Municipal Storm Water Permit for Western Washington (Ecology 2005e). Phase I systems serve a population of more than 100,000 such as Seattle, Tacoma, and unincorporated King, Pierce, Snohomish, and Clark counties.

In August 2005, Ecology issued a new draft Phase II Municipal Storm Water Permit for Western Washington (systems serving smaller communities) for public comment. Ecology developed separate general permits for western and eastern Washington. The Phase II general permit for Western Washington applies to approximately seventy-five jurisdictions located within the 2000 U.S. Census defined urban areas, including Bellingham, Ferndale, and Whatcom County. Special districts such as Ports, Drainage or Diking Districts, and other public entities that own or operate a storm water discharge located in a Phase I or II city or county may also be required to have a storm water permit.

The Washington Department of Transportation (WSDOT) is required by State and Federal regulations to have a storm water permit in areas covered by Phase I and Phase II of the municipal storm water permit program. The WSDOT has agreed to a statewide permit to avoid having a piecemeal storm water program and to promote better management of storm water runoff from all state highways (Ecology 2005e). The permit will cover storm water runoff from state highways, rest areas, weigh stations, scenic view points, park and ride lots, ferry terminals, and maintenance facilities. This permit will replace WSDOT's current coverage under the current Phase I general permits. The draft Ecology Municipal Storm Water Permits are found at: http://www.ecy.wa.gov/programs/wq/stormwater/municipal/issue_permits.html. Ecology expects final permits to be issued in the spring of 2006.

Ecology Industrial Storm Water General Permit

The current Ecology Industrial Storm Water general permit became effective on September 20, 2002. The previous permit was appealed. A significant difference was the requirement for storm water sampling. The permit can be found at <http://www.ecy.wa.gov/programs/wq/stormwater/industrial/index.html#Download>.

Facilities that have no industrial activities or materials exposed to storm water may be eligible for a "conditional no exposure certificate". Ecology has prepared a guidance document for developing a Storm Water Pollution Prevention Plan for industrial facilities found at <http://www.ecy.wa.gov/programs/wq/stormwater/manual.html> and an electronic applications system.

Ecology Construction Storm Water General Permit

A permit is required for all soil disturbing activities (including grading, stump removal, demolition) where one or more acres will be disturbed, and stormwater will be discharged to a receiving water directly (e.g., wetlands, creeks, unnamed creeks, rivers, marine waters, ditches, estuaries), or to storm drains that discharge to a receiving water. Ecology issued the new final general permit on November 16, 2005. On August 29, 2001, the Pollution Control Hearings Board issued a partial stay of the construction stormwater general permit. The Order Granting Partial Stay prohibits any new coverage under the Construction Stormwater General Permit if (Ecology 2005a):

- The construction activity may discharge to Section 303(d) listed waters and will include the pollutant for which the water body is listed - unless it can be documented that no water quality violation will occur or if
- The construction activity may discharge to a waterbody subject to a total maximum daily load (TMDL) determination - unless the discharge would be in compliance with the TMDL.

Ecology Sand and Gravel Storm Water General Permit

On February 4, 2005 an Ecology general permit for the sand and gravel industry became effective. This general permit provides requirements for discharges of process water, storm water, and mine dewatering water associated with sand and gravel operations, rock quarries and similar mining activities, including stockpiles of mined materials, concrete batch operations, and hot mix asphalt operations (Ecology 2005c). The permit can be found at <http://www.ecy.wa.gov/programs/wq/sand/index.html>.

Ecology Upland Fin-fish Hatching and Rearing General Permit

Ecology reissued the Upland Fin-fish Hatching and Rearing general permit with an effective date of June 1, 2005 to control the discharge of pollutants from upland hatcheries into waters of the state. Upland fin-fish hatching and rearing facilities are defined in WAC 173-221(A) as facilities in which fin-fish are hatched, fed, nurtured, held, maintained, or reared to reach the size of release or for market sale and are not located within waters of the state. This includes fish hatcheries, rearing ponds, spawning channels, and other similarly constructed or fabricated public, tribal (on non-tribal land), or private facilities (Ecology 2005b). The permit can be found at

http://www.ecy.wa.gov/programs/wq/permits/permit_pdfs/upland_fin_fish/FinFishHatcheryPermit.pdf.

Ecology NPDES Permit Data

Ecology's Water Quality Permit Life Cycle System (WPLCS) database contains information about individual permits issued under the NPDES and State Wastewater Discharge permits (Ecology 2005d). The WPLCS database includes information related to permits managed by Ecology's four regional offices and to permits managed on a statewide basis. These include about 35 major dischargers administered by the Industrial Section at Ecology, and the storm water industrial and storm water construction permits managed by the Storm Water Unit at Ecology. The most commonly requested information (permit lists / facility information) is updated monthly and posted online at

<http://www.ecy.wa.gov/programs/wq/permits/wplcs/index.html>. Further data requests such as

the discharge monitoring reports (DMRs) or permit limit information may be made under the Freedom of Information Act.

2.3.3 Tribal Authority to Implement NPDES Programs

Under CWA Section 518 (e) Treatment as a State (TAS), tribes may seek authority to implement CWA sections 104, 106, 303, 305, 308, 309, 314, 319, 401, 402, 404, and 406 of the CWA. Clean Water Act Section 405 (Disposal of Sewage Sludge) was omitted by oversight of Congress in the 1987 amendments to the CWA. The preamble to the EPA final rule establishing the TAS requirements for CWA Section 402, found in the Dec. 22, 1993, 58 Federal Register 67966, explains the linkage between CWA Section 402 and 405 and the justification for allowing TAS for CWA Section 405 (McAllister 2005). Therefore, tribes can apply to administer the NPDES permitting program and the pretreatment program of CWA Section 402. According to 40 CFR 403.10 (a), no state [tribal] NPDES permitting program can be approved under CWA Section 402 unless it meets the State [Tribal] Pretreatment Program requirements.

A tribe can also choose to apply for authority to administer CWA Section 405 (Disposal of Sewage Sludge) and develop an approved Sludge Management Program. In some cases, the sewage sludge use or disposal requirements are included in NPDES permits, or they are issued in separate “sludge only permits for facilities that generate, treat, or dispose of sewage sludge (EPA 1994). Sewage sludge can be regulated through the CWA Section 402 as a condition on a NPDES permit or through CWA Section 405 as a separate permit. The current NPDES permits for Lummi Tribal Sewer District (LTSD) wastewater treatment plants mention biosolids, but do not have any specific requirements (McCourt 2005). Biosolids are land applied following 40 CFR 503 regulations. The LTSD applied for a separate sewage sludge permit in 1996, but the EPA took no action.

If a state or tribe obtains authority for only NPDES permitting, the EPA will implement the other program activities. For example, a state or tribe may have an approved NPDES Permitting Program, but has not received the EPA approval of the state or tribe’s Sludge Management Program. The EPA Region would be responsible for ensuring conditions to implement the Standards for the Use or Disposal of Sewage Sludge (40 CFR 503) were included in NPDES permits issued to POTWs. The EPA may issue a separate NPDES permit with the applicable sewage sludge standards and requirements, or may negotiate with the state or tribe on joint issuance of NPDES permits.

In general, once a state or tribe is authorized to issue permits or administer a part of the program, the EPA no longer conducts these activities. However, the EPA must have an opportunity to review each permit issued by the state, tribe, or territory and may formally object to elements that conflict with federal requirements. If the permitting agency does not address the objection points, the EPA will issue the permit directly. Once a permit is issued through a government agency, it is enforceable by the approved state, tribal, and/or federal agencies (including EPA) with legal authority to implement and enforce the permit. Permits are also enforceable by private citizens in federal court.

2.3.4 Tribal Eligibility and Application Requirements

There are two stages to applying for authority to administer a NPDES program: 1) applying for and obtaining TAS, and 2) applying for program approval. An Indian tribe needs separate approvals of eligibility for TAS for each section of the CWA, but a tribe does not need to submit the same information twice, unless there is a benefit to having all information in one submittal (McAllister 2005). Requirements for state and tribal NPDES program approval are found at 40 CFR Parts 123, 403, and 501 (if the state or tribe wishes to administer the sewage sludge program under a separate program, such as a solid waste program).

NPDES Permitting Program Eligibility and Application

The requirements for eligibility and application for authorization to implement a NPDES program are found in 40 CFR 123. A tribe is eligible to apply for NPDES program authority if it meets the following TAS criteria in 40 CFR 123.31:

- (1) The Indian Tribe is recognized by the Secretary of the Interior.
- (2) The Indian Tribe has a governing body carrying out substantial governmental duties and powers.
- (3) The functions to be exercised by the Indian Tribe pertain to the management and protection of water resources which are held by an Indian Tribe, held by the United States in trust for the Indians, held by a member of an Indian Tribe if such property interest is subject to a trust restriction on alienation, or otherwise within the borders of an Indian reservation.
- (4) The Indian Tribe is reasonably expected to be capable, in the Regional Administrator's judgment, of carrying out the functions to be exercised, in a manner consistent with the terms and purposes of the Act and applicable regulations, of an effective NPDES permit program.
- (5) An Indian Tribe which meets the criteria described in 1-4 of this section must also satisfy the State program requirements described in 40 CFR 123.

If the EPA has previously determined that the tribe has met the prerequisites that make it eligible to assume a role similar to that of a state (TAS) as provided by statute under the Safe Drinking Water Act or the CWA, then the tribe only needs to provide additional information unique to the NPDES program or updates. The application for program approval must include the following information listed in 40 CFR 123.32:

- (a) A statement that the Tribe is recognized by the Secretary of the Interior;
- (b) A descriptive statement demonstrating that the Tribal governing body is currently carrying out substantial governmental duties and powers over a defined area. This statement should:
 - (1) Describe the form of the Tribal government;
 - (2) Describe the types of governmental functions currently performed by the Tribal governing body, such as, but not limited to, the exercise of police powers affecting (or relating to) the health, safety, and welfare of the affected population; taxation; and the exercise of the power of eminent domain; and
 - (3) Identify the source of the Tribal government's authority to carry out the governmental functions currently being performed.

(c) A map or legal description of the area over which the Indian Tribe asserts authority under section 518(e)(2) of the Act; a statement by the Tribal Attorney General (or equivalent official authorized to represent the Tribe in all legal matters in court pertaining to the program for which it seeks approval) which describes the basis for the Tribe's assertion (including the nature or subject matter of the asserted regulatory authority); copies of those documents such as Tribal constitutions, by-laws, charters, executive orders, codes, ordinances, and/or resolutions which support the Tribe's [beliefs] relevant to its assertion under section 518(e)(2) of the Act; and a description of the location of the surface waters for which the Tribe proposes to establish an NPDES permit program.

(d) A narrative statement describing the capability of the Indian Tribe to administer an effective, environmentally sound NPDES permit program. The statement should include:

- (1) A description of the Indian Tribe's previous management experience which may include the administration of programs and service authorized by the Indian Self-Determination and Education Assistance Act (25 U.S.C. 450 et seq.), the Indian Mineral Development Act (25 U.S.C. 2101 et seq.), or the Indian Sanitation Facility Construction Activity Act (42 U.S.C. 2004a);
- (2) A list of existing environmental or public health programs administered by the Tribal governing body, and a copy of related Tribal laws, regulations, and policies;
- (3) A description of the entity (or entities) which exercise the executive, legislative, and judicial functions of the Tribal government;
- (4) A description of the existing, or proposed, agency of the Indian Tribe which will assume primary responsibility for establishing and administering an NPDES permit program (including a description of the relationship between the existing or proposed agency and its regulated entities);
- (5) A description of the technical and administrative abilities of the staff to administer and manage an effective, environmentally sound NPDES permit program or a plan which proposes how the Tribe will acquire additional administrative and technical expertise. The plan must address how the Tribe will obtain the funds to acquire the administrative and technical expertise.

(e) The Regional Administrator may, at his or her discretion, request further documentation necessary to support a Tribe's eligibility.

A tribe which the EPA determines meets the TAS criteria and requirements above must also satisfy the State program requirements described in CFR 40.123.22. These include:

- A Tribal NPDES program description.
- A statement from the Tribal Counsel that the laws of the tribe provide adequate authority to implement each of the sections of the NPDES program described.
- Memorandum of Agreement with the EPA Regional Administrator.
- An approved continuing planning process under 40 CFR 130.5.
- A program that ensures that any board or body which approves all or portions of permits shall not include as a member any person who receives, or has during the

previous two years received a significant portion of income directly or indirectly from permit holders or applicants for a permit.

- A compliance evaluation program with procedures for receipt, evaluation, retention and investigation for possible enforcement of all notices and reports required of permittees and inspection and surveillance procedures to determine, independent of information supplied by regulated persons, compliance or noncompliance with applicable program requirements.
- A program which is capable of making comprehensive surveys and periodic inspections of all facilities.
- Procedures for receiving and ensuring proper consideration of violation information submitted by the public.
- Maintenance of a comprehensive inventory of all sources covered by NPDES permits and a schedule of reports required to be submitted by permittees to the tribe.
- Enforcement authority and capacity described in 40 CFR 123.27 to:
 - (1) To restrain immediately and effectively any person by order or by suit in tribal court from engaging in any unauthorized activity which is endangering or causing damage to public health or the environment;
 - (2) To sue in courts of competent jurisdiction to enjoin any threatened or continuing violation of any program requirement, including permit conditions, without the necessity of a prior revocation of the permit;
 - (3) To assess or sue to recover in court civil penalties and to seek criminal remedies, including fines;
 - (4) Procedures for assessment of the cost of investigations, inspections, or monitoring surveys which lead to the establishment of violations;
 - (5) Levy civil penalties and criminal fines; and
 - (6) Provide for public participation in enforcement actions.

Indian Tribes that cannot satisfy the criminal enforcement authority requirements above may still receive program approval if they meet the requirement for enforcement authority established under 40 CFR 123.34:

To the extent that a tribe is precluded from asserting criminal enforcement authority as required under 40 CFR 123.27, the Federal Government will exercise primary criminal enforcement responsibility. The tribe, with the EPA Region, shall develop a procedure by which the tribal agency will refer potential criminal violations to the EPA Regional Administrator, as agreed to by the parties, in an appropriate and timely manner. This procedure shall encompass all circumstances in which the tribe is incapable of exercising the enforcement requirements of 40 CFR 123.27. This agreement shall be incorporated into a joint or separate Memorandum of Agreement with the EPA Region, as appropriate.

- Issue permits to control of disposal of pollutants into wells.
- Provide that no permit shall be issued when the EPA Regional Administrator has objected in writing under 40 CFR 123.44.

- Include the establishment of technical standards for concentrated animal feeding operations.
- Provide for sharing of information with the EPA to the extent and in the manner agreed to by the Tribal Program Director and the EPA Regional Administrator in the Memorandum of Agreement.
- Include the EPA review of and objections to tribal permits.
- Noncompliance and program reporting: quarterly, semi-annual, and annual reports as required in 40 CFR 123.45.

The EPA Regional Administrator shall process an application of a tribe in a “timely manner” following the procedures described in 40 CFR 123(D):

The EPA shall publish notice of the State's [Tribe's] application in the Federal Register, and in enough of the largest newspapers in the State to attract statewide attention, and shall mail notice to persons known to be interested in such matters, including all persons on appropriate State and the EPA mailing lists and all permit holders and applicants within the State. The notice shall:

- (1) Provide a comment period of not less than 45 days during which interested members of the public may express their views on the State [Tribal] program;
- (2) Provide for a public hearing within the State to be held no less than 30 days after notice is published in the Federal Register;

Within ninety days of the receipt of a complete program submission under 40 CFR 123.21 the EPA must approve or disapprove the program based on the requirements and taking into consideration all comments received. After initial EPA approval, tribal NPDES programs can be revised as described in 40 CFR 123.62.

Sludge Management Program

Requirements for eligibility of tribes to administer a Sludge Management Program under CWA 405(f) are found in 40 CFR 501.22 and are the same as the requirements for the NPDES Program summarized above. The Sludge Management Program submission elements are listed in 40 CFR 501.11 and are the same as for the NPDES program listed above, except that the program description, tribal regulations, and program requirements are specific to sludge management and must meet the requirements listed in 40 CFR 501.12-21.

Pretreatment Program

A State [Tribal] Pretreatment Program must have the following elements found in 40 CFR 403.10 (f):

- (1) Legal authority to:
 - (i) Incorporate POTW Pretreatment Program conditions into NPDES permits issued to POTW's; require compliance by POTW's with these incorporated permit conditions; and require compliance by Industrial Users with Pretreatment Standards;
 - (ii) Ensure continuing compliance by POTW's with pretreatment conditions incorporated into the POTW Permit through review of monitoring reports submitted to the Tribal Director by the POTW and ensure continuing compliance by Industrial

Users with Pretreatment Standards through the review of self-monitoring reports submitted to the POTW or to the Director by the Industrial Users;

- (iii) Carry out inspection, surveillance, and monitoring procedures which will determine, independent of information supplied by the POTW, compliance or noncompliance by the POTW with pretreatment conditions incorporated into the POTW Permit; and carry out inspection, surveillance, and monitoring procedures which will determine, independent of information supplied by the Industrial User, whether the Industrial User is in compliance with Pretreatment Standards;
- (iv) Seek civil and criminal penalties, and injunctive relief, for noncompliance by the POTW with pretreatment conditions incorporated into the POTW Permit and for noncompliance with Pretreatment Standards by Industrial Users.
- (v) Approve and deny requests for approval of POTW Pretreatment Programs submitted by a POTW to the Director;
- (vi) Deny and recommend approval of (but not approve) requests for Fundamentally Different Factors variances submitted by Industrial Users; and
- (vii) Approve and deny requests for authority to modify categorical Pretreatment Standards to reflect removals achieved by the POTW in accordance with the criteria and procedures set forth in 40 CFR 403.7, 403.9 and 403.11.

(2) Procedures. The Director shall have developed procedures to:

- (i) Identify POTW's required to develop Pretreatment Programs and notify these POTW's of the need to develop a POTW Pretreatment Program. In the absence of a POTW Pretreatment Program, the State [Tribe] shall have procedures to carry out the activities;
- (ii) Provide technical and legal assistance to POTW's in developing Pretreatment Programs;
- (iii) Develop compliance schedules for inclusion in POTW Permits for the completion of tasks needed to implement a POTW Pretreatment Program;
- (iv) Sample and analyze:
 - (A) Influent and effluent of the POTW to identify, independent of information supplied by the POTW, compliance or noncompliance with pollutant removal levels set forth in the POTW permit; and
 - (B) The contents of sludge from the POTW and methods of sludge disposal and use to identify, independent of information supplied by the POTW, compliance or noncompliance with requirements applicable to the selected method of sludge management;
- (v) Investigate evidence of violations of pretreatment conditions set forth in the POTW Permit by taking samples and acquiring other information as needed. This data acquisition shall be performed with sufficient care as to produce evidence admissible in an enforcement proceeding or in court;
- (vi) Review and approve requests for approval of POTW Pretreatment Programs and authority to modify categorical Pretreatment Standards submitted by a POTW to the Director; and
- (vii) Consider requests for Fundamentally Different Factors variances submitted by Industrial Users in accordance with the criteria and procedures set forth in 40 CFR 403.13.

(3) Funding. The Director shall assure that funding and qualified personnel are available to carry out the authorities and procedures described in paragraphs (f) (1) and (2) of this section.

The tribal request for State [Tribal] Pretreatment Program approval must include the items described in 40 CFR 403.10(g):

- (1)(i) A statement from the State Attorney General [Tribal Counsel] that the laws of the State [Tribe] provide adequate authority to implement the requirements of this program. The authorities cited by the Attorney General [Tribal Counsel] in this statement shall be in the form of lawfully adopted State [Tribal] statutes or regulations which shall be effective by the time of approval of the State [Tribal] Pretreatment Program; and
- (ii) Copies of all State [Tribal] statutes and regulations cited in the above statement;
- (2) A description of the funding levels and full- and part-time personnel available to implement the program; and
- (3) Any modifications or additions to the Memorandum of Agreement (required by 40 CFR 123.24) which may be necessary for the EPA and the State [Tribe] to implement the requirements of this program.

It is assumed that this information can be submitted to the EPA in conjunction with the application for NPDES Permitting Program authority. There is no language regarding this in 40 CFR 403. In 40 CFR 403.10 (e), a State [Tribe] with an EPA approved Pretreatment Program may assume responsibility for implementing the POTW Pretreatment Program requirements in lieu of requiring the POTW to develop its own Pretreatment Program. However, this does not preclude POTW's from independently developing Pretreatment Programs.

3.0 CONSIDERATIONS FOR DECISION TO SEEK PROGRAM AUTHORITY

Major issues that the Lummi Nation should consider when deciding whether to apply for authorization to administer the NPDES program are (EPA 1994):

- How to best provide for surface water quality protection;
- Impact on sovereignty and plans for self-governance, including job creation opportunities;
- Effect on tribal government, administration, and organizations, including natural resources management and legal departments, as well as the NPDES permitted facilities operated by the LIBC;
- Availability of EPA assistance in the form of grants and technical assistance to develop and maintain authority, as well as other fees or taxes to support the programs, and;
- Costs to seek authority, initial program development, and on-going program costs after authority is obtained.

General considerations applicable to the Lummi Nation are presented in tables in this section.

3.1 EFFECT ON SURFACE WATER QUALITY PROTECTION

Table 3 summarizes the potential advantages/benefits and potential issues/problems associated with the Lummi Nation assuming authority to regulate point source discharges of water pollution.

Table 3. Surface Water Quality Protection

Potential Advantages/Benefits	Potential Issues/Problems
Development and analysis of data from NPDES permittees could be useful for long-term natural resource management decision-making.	Cost of organizing and reviewing data from operators. Most, if not all, of the required water quality monitoring data for permittees are already available from the EPA or a tribal permittee. Therefore, the Lummi Nation can access and analyze these data without delegated authority.
Authority could enhance Lummi Nation control and protection of surface water and ground water resources.	Administrative costs.
Local administration of the NPDES program could enhance effectiveness and timeliness of enforcement.	Administrative costs to train and retain permit writers, inspectors, and legal staff.

3.2 EFFECT ON SOVEREIGNTY AND SELF-GOVERNANCE

Obtaining authorization to further regulate Lummi Nation Waters supports tribal self-governance in several ways. For example, it gives a tribe increased authority over what happens on its lands. A tribe may impose its own water pollution control priorities by

establishing tribal regulations that are as (or more) stringent than federal regulations. In addition, a tribe will implement the program and carry out enforcement actions, as appropriate. Some effects of obtaining NPDES Program authority on self-governance are summarized in Table 4.

Table 4. Effect on Sovereignty and Self-Governance

Potential Advantages/Benefits	Potential Issues/Problems
Establishment of Lummi Nation regulations for NPDES permits.	Lummi Nation regulations must be as strict as or stricter than the EPA rules and be modified as the EPA regulations are changed. Program revenues will not necessarily cover program costs and also will not be available until after the program is implemented.
Lummi Nation control of regulation enforcement.	The Lummi Nation must designate and fund an independent regulatory agency (independent from any tribal permittees). Any potential overlapping interests between permittees and the enforcement agency must be resolved to the EPA's satisfaction.
Strengthening of Lummi Nation government and the ability of the tribal government to exercise civil jurisdiction over the action of tribal and non-tribal members who may violate tribal regulations.	In addition to existing procedures, the Lummi Nation must establish administrative procedures specific to the NPDES programs for civil enforcement against non-Indians. This may draw opposition from non-tribal members who live on the Reservation and potentially from state and county governments and result in legal challenges.
Enhanced recognition of Lummi Nation government and authority by non-tribal interests and governments. Authority could help ensure surface water quality which is fundamental to the political integrity, economic security, and health and welfare of the Lummi Nation.	Potential legal costs to ensure jurisdictional authority over activities on fee lands and discharges by non-tribally operated facilities.
A Lummi Nation program would limit state attempts to regulate and influence resource development decisions on the Reservation.	The state is not currently asserting NPDES authority on the Reservation. It is likely that the Lummi Water Quality Standards will be numerically equivalent to the State of Washington standards.

Additional Discussion of Effect on Lummi Nation Sovereignty and Self-Governance

A regulatory agency independent from any regulated dischargers must be established. A review of the current Lummi Nation governmental structure suggests that since the Lummi Tribal Sewer District (LTSD) is administratively associated with the Lummi Planning Department and directed by a quasi-autonomous sewer district board, and since the Natural Resources Department already administers the Water Resources Protection Code (Title 17),

the Natural Resources Department could be the independent NPDES regulatory agency for these facilities.

In addition, since the Economic Development Department, the Planning Department, or the Housing Division administers construction projects that require NPDES permits for storm water, the Natural Resources Department could be the independent NPDES Regulatory agency. However, because the Natural Resources Department operates the fish hatcheries, the Natural Resources Department cannot be the independent regulatory agency for these facilities. Therefore, either a new independent regulatory agency would need to be created (perhaps as part of the Reservation Attorney Office or the Law and Order Department) or the existing Water Resources Division would have to become independent of the other divisions (e.g., Enforcement Division) of the Natural Resources Department.

3.3 EFFECT ON ADMINISTRATIVE AND ORGANIZATIONAL CAPABILITIES

Administering an NPDES and/or sewage sludge program provides important administrative, regulatory, and technical opportunities for a tribe. The process of obtaining authorization to administer these programs can (EPA 1994):

- Broaden the scope of government,
- Build institutional capabilities, and
- Increase the tribe's experience in developing and overseeing large programs and implementing an information management system.

These programs can enable more members of the Lummi Nation to gain an understanding of water pollution and other environmental issues. Tribal authority also imposes administrative, regulatory, and technical burdens (EPA 1994). For example, the tribe must write necessary statutes and regulations. The Lummi Nation may also need to create or expand an independent bureaucracy to establish and regulate the NPDES and/or sewage sludge program. The effects of obtaining NPDES Program authority on Lummi Nation administrative and organizational capabilities are summarized in Table 5.

Table 5. Effect on the Lummi Nation Administrative and Organizational Capabilities

Potential Advantages/Benefits	Potential Issues/Problems
Strengthening of Tribal government by developing additional regulatory enforcement capacity.	Possible regulator-regulatee conflicts. Tribal governments must ensure that regulatory and regulated entities are separate, in order to avoid conflicts of interest when the tribe owns or operates a discharger or sewage sludge facility that would be regulated by the NPDES and/or sewage sludge program.
Development and improvement of Lummi Nation administrative procedures.	Development of additional administrative structures and programs may pose both organizational and funding problems, especially for small tribes, such as the Lummi.
Lummi Nation government would provide	Lummi Nation members obtaining construction

Table 5. Effect on the Lummi Nation Administrative and Organizational Capabilities

Potential Advantages/Benefits	Potential Issues/Problems
more direct services to Lummi Nation members.	storm water permits and LTSD staff would see the “more direct services” if oversight was conducted by the Lummi Nation instead of the EPA.
Better integration of Lummi Nation resource management functions.	Increased costs to support necessary staff resources.
Further opportunities to integrate the Lummi Nation court system into dispute resolution regarding Lummi Nation resources.	Costs associated with regulatory actions may be prohibitive in some cases.
More opportunity for Lummi Nation Commissions to make decisions and develop policy regarding the regulation of the environment.	Commissions already have numerous decision-making opportunities and will have additional work load and administrative costs.
Enhance Lummi Code of Law through development of additional environmental laws specifically designed to meet needs.	Costs associated with regulatory actions may be prohibitive in some cases.
Additional employment of Lummi Nation members in natural resource and water system management.	Additional technical, engineering, and legal staff or contracted services will be required to obtain and implement primacy. Costs of staff development, training, and maintenance. Tribal authority may attract or discourage certain industries or commercial activities to the Reservation.

3.4 EFFECT ON EPA AND IHS ASSISTANCE

The EPA and Indian Health Service (IHS) currently provide various forms of technical and financial assistance to the LTSD and LIBC departments. Relationships and memorandums of understanding may change under primacy. Table 6 summarizes the potential effects of tribal authority for a NPDES program on EPA and IHS assistance.

Table 6. Effect on EPA and IHS Assistance

Potential Advantages/Benefits	Potential Issues/Problems
Technical assistance for preparation of a program development grant, development plan.	There may be limited EPA assistance available to the Lummi Nation due to budget and resource limitations.
Program Development Grant or General Assistance Program (GAP) funds may be available.	The Lummi Nation must provide at least a 10% match (25% more likely) and in-kind services may be used for Program Development Grants. No match is required for GAP grants.
Annual Performance Partnership Grants may be available for maintaining	The Lummi Nation will likely be expected to contribute 5 to 10 percent of the on-going

Table 6. Effect on EPA and IHS Assistance

Potential Advantages/Benefits	Potential Issues/Problems
program.	costs.
The EPA Region 10 provides minimal technical and compliance assistance to the LTSD wastewater treatment plants and offers some third party training.	The EPA Region 10 inspections and compliance assistance would be discontinued. The Lummi Nation would still be able to participate in third party training offered by the EPA Region 10 or the IHS.
IHS will continue to provide technical assistance and funding for wastewater system improvements after the Lummi Nation obtains authority.	If the Lummi Nation adopts wastewater system design regulations stricter than EPA's, the scope of IHS services may drop because of increased construction costs to meet the higher standards. Also, IHS may no longer be able to perform some activities that would now be deemed regulatory, such as plan reviews and sanitary surveys.

Additional Discussion on the Effect on EPA and IHS Assistance

The EPA involvement with LTSD is in the form of negotiations with permit writers, compliance inspections, and regional training workshops (McCourt 2005). The EPA does not conduct plan review of LTSD improvements and construction projects. Plans drafted by engineers contracted by the LTSD are reviewed by the funding agency only, such as US Department of Agriculture Rural Development.

The LTSD has a good relationship with the IHS Sanitation Construction Division (Ballew 2004). During self-governance discussions, the IHS agreed to continue to provide technical assistance to the Lummi Nation (Ballew 2004). Technical assistance has come most recently in the form of operator training and education for certification tests and help in diagnosing infiltration problems in the sewer lines. Under self governance, the Lummi Tribal Water District (LTWD) and the Lummi Planning Department administer the IHS Scattered Site funds applied for each year. These funds are typically used to connect tribal residences to the LTWD and provide sanitation facilities. Lummi Water and Sewer Districts have also obtained funds awarded to systems ranked in the IHS/EPA Sanitary Deficiency System (SDS). It does not appear that access to Scattered Site and SDS funding would be affected by NPDES Program authority. The relationship between IHS and the Lummi Nation may come under review during program authority discussions. Roles and responsibilities will likely need to be clarified in a MOA.

3.5 OTHER TRIBAL EFFORTS TO OBTAIN NPDES PROGRAM AUTHORITY

Currently, there are no Indian tribes in the United States that have obtained authority from the EPA to administer a NPDES Program. The Navajo Nation has submitted an application to the EPA Region 9 for TAS and program authority.

3.5.1 Navajo NPDES Program

The Navajo NPDES Program began in September 1992 with a federal grant from the EPA under Section 104(b)(3) of the CWA (EPA 2005e). There are approximately thirty-five NPDES permits for facilities that discharge wastewater on the Navajo Nation. These types of facilities include: sewage treatment plants/lagoons, power plants, coal mines, oil field tank batteries, and agricultural industry. There are also several facilities on the Navajo Nation covered under NPDES general permit for storm waste discharges (EPA 2005e).

The EPA Region 9 is responsible for issuing NPDES permits, enforcing permit compliance, and responding to NPDES-related incidents in the Navajo Nation. Due to the geographical location, Region 9 may not respond to all concerns (EPA 2005e). Numerous unpermitted NPDES activities reportedly occur on the Navajo Nation (EPA 2005e) such as: over-flowing sewer lagoons; indiscriminate dumping of septic tank waste; discharges of wastewater from oil field tank batteries; unchecked storm water runoff from both industrial and construction utility sites; as well as, unpermitted off-reservation discharges impacting the Navajo Nation. The Navajo NPDES Program has completed an inventory of actual and potential point source discharges on the Navajo Nation and continues to investigate complaints by Navajo residents on NPDES-related incidents.

The goal of the Navajo NPDES Program is to obtain the EPA approved authorization to operate the NPDES, Pretreatment, and Sludge Management Programs (EPA 2005e). Currently, staff are working on updating a 1997 program submission package and application for program authority (Antonio 2005). The Navajo Nation has passed a Navajo Nation CWA, Navajo Nation Water Quality Standards, and staff are currently updating Navajo NPDES regulations (Antonio 2005). The Navajo NPDES Program currently assists the EPA Region 9 in reviewing and submitting recommendations on NPDES permit application and conducts joint compliance inspections of NPDES permitted facilities. The Sludge Management of the Navajo NPDES Program regulates the use and disposal of sewage sludge, which includes septic tank waste. The Navajo NPDES program will be responsible for establishing quality standards for sewage sludge and will require POTWs to establish adequate management practices (EPA 2005e). All requirements will be specified in the NPDES permits, in separate “sludge only” permits issued to the POTWs or through regulations issued by the Navajo Nation EPA (EPA 2005e). The Navajo Nation NPDES Program does not expect to be self-sustaining using EPA grants and fees and will likely require additional tribal government funding support (Antonio 2005).

4.0 ESTIMATED PRIMACY PROGRAM COSTS, POTENTIAL FUNDING, AND RECOMMENDED ACTION PLAN

Lummi Nation NPDES program development and implementation cost estimates and potential funding sources are described below along with recommended approaches that are elements of an action plan. The general steps to evaluate, seek, and obtain authority to administer a NPDES program are the following:

1. Decide whether to pursue authority and determine the scope of authority.
2. If yes, obtain funding for NPDES Program development costs and apply to the EPA for TAS.
3. Develop a NPDES Program and begin implementation.
4. Submit NPDES Program information to the EPA for approval and develop NPDES Program funding.
5. Obtain authority and apply to the EPA for ongoing program implementation funds.

These steps are displayed in Figure 4, Lummi Nation NPDES Program Process Flow Chart, along with the parallel or sequential process for CWA Section 303(c) and Section 401 Program approval. Table 7 shows a generalized five-year action plan for the steps described above.

Table 7. Generalized Timeline of NPDES Program Development and EPA Approval Process

2006	2007	2008	2009	2010
Lummi Nation makes decision to seek authority.				
If yes, obtain funding for program development grant. Apply for TAS for CWA Sections 402/405.				
	Develop the Lummi Nation NPDES program, adopt regulations, and begin program implementation.			
	Apply to the EPA for authority. Continue program implementation.		Apply for on-going program grants from the EPA. Implement fees. Continue program.	

4.1 STEP 1: DETERMINE SCOPE OF PRIMACY AND DECIDE WHETHER TO PURSUE

Step one is to determine the scope of authority desired by the Lummi Nation based on some combination of the options. For example, the Lummi Nation NPDES Program scope options include:

- NPDES Permitting and Pretreatment Program (CWA Section 402)
- Sludge Management Program (CWA Section 405)

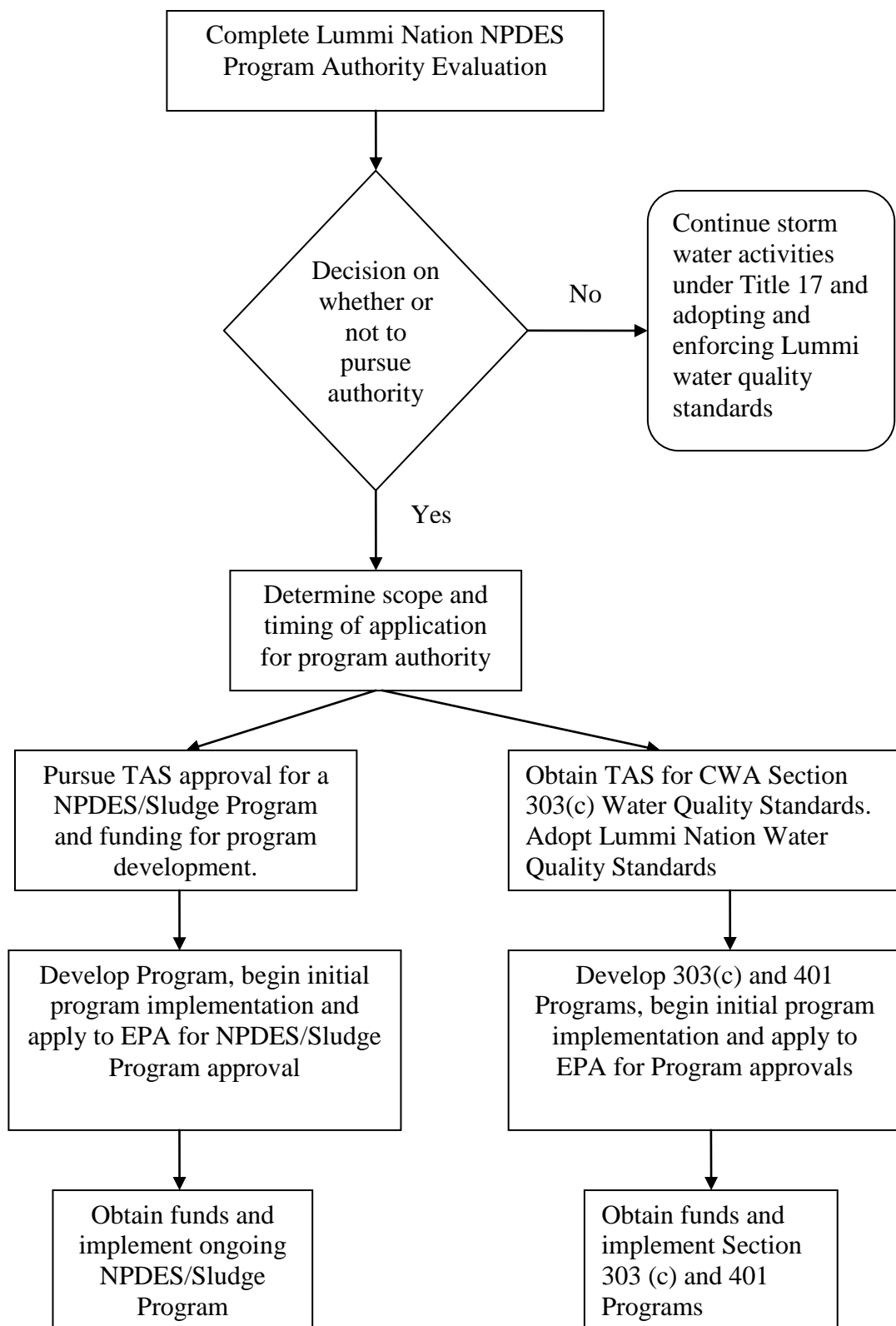


Figure 4. Lummi Nation NPDES Program Process Flow Chart.

- NPDES Permitting and Pretreatment Program (CWA Section 402) and Sludge Management Program (CWA Section 405)

Note that Section 402(b)(1)(D) of the CWA requires that NPDES Programs have the authority “to issue permits which control the disposal of pollutants into wells.” A state or tribe could also have an Underground Injection Control (UIC) Program under SDWA Section 1422 that would satisfy the requirement (40 CFR 123.28). The CWA excludes certain types of well injections from the definition of “pollutant” which are included in an approved SDWA UIC Program. A decision on whether to regulate injection wells under the CWA or the SDWA UIC Program needs to be made.

The timing and sequencing of filing CWA Section 402/405 TAS and program approval applications, as well as adoption of Lummi Nation Water Quality Standards should be considered. A potential sequencing is:

- Obtain TAS status for CWA Sections 303(c) Water Quality Standards and Section 401 (in process with the EPA Region 10 currently) - 2006
- Adopt Lummi Nation Water Quality Standards under authority of Title 17 Lummi Nation Code of Laws - 2006
- Apply for TAS status for CWA Sections 402/405 - 2006
- Submit program approval package to the EPA Region 10 for CWA Sections 303 (c) and 401 program approval – 2007/2008
- Submit program approval package to the EPA Region 10 for CWA Sections 402/405 - 2007/2008

Estimated Costs of Accomplishing Step 1: \$10,000 (0.2 Full time equivalent (FTE)). Costs include contractor/staff report preparation and review, documentation of the staff recommendation, departmental and commission review and approval, and Lummi Indian Business Council (LIBC) approval of decision to pursue authority.

Funding for Accomplishing Step 1: Existing or anticipated LIBC appropriations and/or grants.

Recommended approach: Discuss findings of this evaluation with policy makers and implement policy decision.

4.2 STEP 2: OBTAIN FUNDING FOR NPDES PROGRAM DEVELOPMENT AND APPLY FOR TAS

NPDES Program development funding or similar funding, such as GAP grants, must be obtained to hire, contract, or re-designate staff to develop the program plan, draft regulations, seek Lummi statute and regulation approval, apply for TAS, and document administrative procedures. From 1993 to the present, the Navajo Nation used EPA grants to develop NPDES Program capabilities (Antonio 2005).

4.2.1 Availability of the EPA Program Development Grants

The CWA authorizes the EPA to provide financial assistance for water quality planning and management to tribes under CWA Section 106, Water Pollution Control and Groundwater Management Programs. The EPA provides ninety five percent of the funding for the program award, with a five percent tribal match to support the total award cost. The Lummi Nation has chosen to combine the CWA Section 106 grant, CWA Section 319 grant, and the General Assistance Program (GAP) grant into a single Performance Partnership Grant (PPG). A potential funding source is the General Assistance Program (GAP) element of the PPG. The amount of funding from GAP to the Lummi Nation varies each year, with typically a base funding allocation of \$110,000 and then an opportunity to submit work plans for additional un-met environmental program needs. For FY05, which will fund activities during calendar year 2006, the PPG is \$640,578 of which \$500,578 was from the GAP. A work plan and grant application could be submitted during 2006 for GAP funding for development of a NPDES program during 2007 or GAP funding for 2006 could be reallocated.

4.2.2 Matching Funds Required for the EPA Grants

The EPA provides 95 percent of the funding for the CWA Section 106 program award, with a five percent tribal match to support the total award cost. Similarly, the EPA provides 95 percent of the funding for the CWA Section 319 program award.

Estimated Costs of Accomplishing Step 2: \$10,000 (0.2 FTE)

Funding to Accomplish Step 2: Existing or anticipated LIBC appropriations and/or grants.

Recommended Approach: Discuss findings of this evaluation with policy makers and implement policy decision.

4.3 STEP 3: DEVELOPMENT AND INITIAL IMPLEMENTATION OF LUMMI NATION NPDES PROGRAM

Staffing and cost information from programs serving a much larger geographic area than that of the Lummi Nation are provided below for general consideration and comparison. Table 8 shows the type and number of staff and number of permits administered by these larger programs.

In the Ecology Bellingham Field Office, one of the NPDES permit writers and inspectors is an Environmental Specialist 4 with an annual salary ranging from \$41,520- \$53,136 (Henderson 2005). Typical contracted professional engineering rates for the Lummi Nation are estimated at \$100 per hour for work such as NPDES permit writing.

Table 8. Larger Scale NPDES Program Staff and NPDES Facility Permits (Antonio 2005) (Henderson 2005) (Ecology 2003)

NPDES Permitting Agency	Number of Facility Permits Per Year*	Environmental Specialists	Other Staff
Navajo Nation EPA	35	4.5	1
Bellingham Ecology Field Office	9	1.5 with some engineering support	?
Ecology Statewide	4,626	approximately 50	approximately 78

* It is difficult to estimate a staff to permit ratio because of the five year facility permit cycle that affects the annual work load and the wide range of complexity amongst individual permits. NOIs are not included in this analysis of staff. Ecology figures are for 2001-2003. All other figures are from 2005.

Estimated Costs for Accomplishing Step 3: It is estimated that a Lummi Nation NPDES program would require 0.35 FTE for program development and initial implementation and 200 hours of contracted engineering services per year for a total of approximately \$40,000 per year.

Funding for Accomplishing Step 3: GAP funds can only be used for program development, not implementation. Section 106 program funds could possibly be used for implementation.

Recommended Approach for Step 3: Discuss findings of this evaluation with policy makers and implement policy decision.

4.4 STEP 4: APPLY TO THE EPA FOR NPDES PROGRAM AUTHORITY AND DEVELOP PROGRAM FUNDING

The process of applying for program authority, continuing to implement the initial program, and developing ongoing program funding is estimated to require 0.35 FTE. There will also be substantial legal review and support staff time required to prepare and submit the application and negotiate with the EPA for approval of the program.

A potential source of program implementation funding is permit fees. The EPA Region 10 does not charge permit fees. However, in addition to receiving CWA Section 106 grant funding, Ecology charges fees for NPDES permits found in WAC 173-224. State law requires that all fees charged are based on factors relating to the complexity of permit issuance and compliance, and may be based on pollutant loading and the reduction of the quantity of pollutants. Some selected fees for activities that might occur on the Reservation or other Lummi Nation trust lands are shown in Table 9 as a potential guide.

Table 9. Ecology NPDES Permit Fees from WAC 173-224

FACILITY CATEGORIES	ANNUAL PERMIT FEE 2005
Aquaculture	
Finfish hatching and rearing - Individual Permit	\$4,243
Finfish hatching and rearing - General Permit Coverage	\$2,972
Shellfish hatching	\$146
Aquatic Pest Control	\$319
Boat Yards - Individual Permit Coverage	
With storm water only discharge	\$362
All others	\$725
Boat Yards - General Permit Coverage	
With storm water only discharge	\$252
All others	\$509
Combined Industrial Waste Treatment	
< 10,000 gpd	\$2,829
10,000 - < 50,000 gpd	\$7,071
50,000 - < 100,000 gpd	\$14,145
100,000 - < 500,000 gpd	\$28,290
500,000 gpd and greater	\$42,435
Combined Food Processing Waste Treatment Facilities	\$13,542
Concentrated Animal Feeding Operation	
< 200 Animal Units	\$145
200 - < 400 Animal Units	\$362
400 - < 600 Animal Units	\$725
Dairies \$.50 per Animal Unit not to exceed \$1,015.00 for FY 2005 and \$1,042.00 for FY 2006 and beyond	
Seafood Processing	
< 1,000 gpd	\$1,415
1,000 - < 10,000 gpd	\$3,605
10,000 - < 50,000 gpd	\$6,436
Water Plants - Individual Permit Coverage	\$3,537
Water Plants - General Permit Coverage	\$2,476
Municipal Domestic Wastewater Facility	
Serving <250,000 Residential Equivalents (RE)	\$1.73/ RE
Individual Construction or Industrial Storm Water Permits	
< 50 acres	\$2,829
50 -< 100 acres	\$5,655
100 -< 500 acres	\$8,489
500 acres and greater	\$11,316
Facilities Covered Under the Industrial Storm Water General Permit	
Municipalities and state agencies	\$650
New permit holders without historical gross revenue information	\$375
The permit fee for all other permit holders shall be based on the gross revenue of the business for the previous calendar year	\$100-\$905
Construction Activities Covered Under the Construction Storm Water General Permit	
Less than 5 acres disturbed area	\$350
5 -< 7 acres of disturbed area	\$400

FACILITY CATEGORIES	ANNUAL PERMIT FEE 2005
7 -< 10 acres of disturbed area	\$550
10 -< 20 acres of disturbed area	\$750
20 acres and greater of disturbed area	\$925

In addition to the annual permit fee, Ecology charges first time applicants (except those applying for coverage under a general permit) a one time application fee of twenty-five percent of the annual permit fee, or \$250.00, whichever is greater.

Estimated Costs of Accomplishing Step 4: \$40,000

Funding to Accomplish Step 4: GAP /PPG funds described in Step 2.

Recommended Approach: Grants from the EPA should be pursued initially to fund the NPDES Program implementation. As the program evolves, permit fees should be considered to pay for all or a portion of the program cost.

5.0 SUMMARY AND CONCLUSIONS

Applying for TAS and assuming authority for the NPDES and/or sewage sludge program is entirely voluntary. The questions and responses summarized in Table 10 outline the major issues involved in seeking authorization and managing an effective NPDES and/or sewage sludge program (EPA 1994):

Table 10. Questions to Consider in Seeking Authorization to Administer a NPDES Program

Question	Response
1. Are there enough facilities and/or construction activities requiring an NPDES permit to justify the costs associated with seeking delegation and administering the program?	Policy decision. Staff judgment is no.
2. Are the current delays associated with obtaining NPDES permits from the EPA for tribal and other facilities detrimental enough to justify the costs associated with seeking delegation and administering the program?	Policy decision. Staff judgment is no.
3. Does the Lummi Nation want to expand the tribal regulatory role and ability to protect public health and the environment?	Yes
4. Does the Lummi Nation have, or expect to develop, the necessary infrastructure?	Yes, policy decision.
5. Is the Lummi Nation prepared to promulgate comprehensive NPDES and/or sewage sludge regulations?	Policy decision.
6. Does the Lummi Nation have the organizational ability to develop and maintain an independent regulatory body?	Yes
7. Does the Lummi Nation have, or plan to attain, the financial resources to support the development and continued operation of an NPDES and/or sewage sludge program?	Policy decision.
8. Does the Lummi Nation have the revenue to hire and train the staff necessary to run an NPDES and/or sewage sludge program and is the Lummi Nation willing to commit to long-term financial support of the program?	Policy decision.

Answers to these questions may highlight possible areas of concern before an application is submitted or an NPDES and/or sewage sludge program is developed. Based on this evaluation, the technical staff recommendation is the following:

1. Currently, there are not enough facilities and/or construction activities requiring an NPDES permit to justify the costs associated with seeking delegation and administering a NPDES program.
2. The current delays associated with obtaining NPDES permits from the EPA on the Reservation and for other tribal facilities are not detrimental enough to justify the costs associated with seeking delegation and administering the program.
3. The results of this evaluation should be revisited in five years to determine if changes in conditions justify the costs associated with seeking and administering the program.

6.0 REFERENCES

- Antonio, Patrick. 2000. Staff Navajo Nation EPA Water Quality/NNPDES Program. Personal Communication. Conference Call. September 1, 2005.
- Ballew, Bill. 2004. Planner, Lummi Nation Planning Department. Personal communication-Meeting. September 22, 2004.
- Bortleson, G.C., M.J. Chrzastowski, and A.K. Helgersen. 1980. Historical Changes of Shoreline and Wetland at Eleven Major Deltas in the Puget Sound Region, Washington. U.S. Geological Survey. Hydrologic Investigations Atlas HA-617.
- Deardorff, Leroy. 2000. Director, Lummi Nation Environmental Protection Program. Letter to Mr. Robichaud Regarding Request to Prioritize NPDES Permitting on the Lummi Indian Reservation. May 5, 2000.
- Environmental Protection Agency (EPA). 1996. Office of Water. NPDES Permit Writers' Manual. December 1996. EPA-833-B-96-003.
- Environmental Protection Agency (EPA). 1999. Office of Wastewater Management. Introduction to the National Pretreatment Program. EPA 833 B98 002. February 1999.
- Environmental Protection Agency (EPA). 2002. Office of Wastewater Management. Water Permitting 101. July 2002.
- Environmental Protection Agency (EPA). 2005a. Authorization Status for EPA's Stormwater Construction and Industrial Programs. <http://cfpub.epa.gov/npdes/stormwater/authorizationstatus.cfm>. Accessed July 15, 2005.
- Environmental Protection Agency (EPA). 2005b. Bellingham Urban Area Map with Roads. http://www.epa.gov/npdes/pubs/wa_bellingham_rds.pdf. Accessed September 2, 2005.
- Environmental Protection Agency (EPA). 2005c. Enforcement and Compliance History Online (ECHO). http://www.epa.gov/echo/compliance_report_water.html. Accessed August 19, 2005.
- Environmental Protection Agency (EPA). 2005d. EPA Construction General Permit. <http://cfpub.epa.gov/npdes/stormwater/cgp.cfm>. Accessed September 1, 2005.
- Environmental Protection Agency (EPA). 2005e. Navajo Nation Environmental Protection Agency - Water Quality Program. <http://www.epa.gov/owm/mab/indian/navajo.htm>. Accessed July 15, 2005.
- Environmental Protection Agency (EPA). 2005f. Expiration of EPA's Multi-Sector General Permit (MSGP-2000). http://www.epa.gov/npdes/pubs/msgp_expired.pdf Accessed December 13, 2005.
- Environmental Protection Agency (EPA). 2005g. View Stormwater NOIs. <http://cfpub.epa.gov/npdes/stormwater/noi/noisearch.cfm>. Accessed October 27, 2005.
- Environmental Protection Agency Region 10 (EPA R10). 2002. Designation Criteria for Small Municipal Separate Storm Sewer Systems (MS4) Draft. June 2002. <http://yosemite.epa.gov/R10/WATER.NSF/95537302e2c56cea8825688200708c9a/543f87b3c22bb2ae88256ad10073e402>. Accessed September 5, 2005.
- Environmental Protection Agency Region 10 (EPA R10). 2005. Storm Water Requirements for Small Municipal Separate Storm Sewer Systems (MS4s)

- <http://yosemite.epa.gov/R10/WATER.NSF/95537302e2c56cea8825688200708c9a/543f87b3c22bb2ae88256ad10073e402!OpenDocument>. Accessed September 1, 2005.
- Environmental Protection Agency Watershed Academy (EPA Watershed Academy). 2005. Introduction to the Clean Water Act. <http://www.epa.gov/watertrain>. Accessed June 29, 2005.
- Freimund, Jeremy. 1997. Water Resources Manager. Lummi Nation Natural Resources Department. Memo to Leroy Deardorff Regarding Dave Ragsdale's NPDES Compliance Visit. January 15, 1997.
- Henderson, Mark. 2005. Bellingham Ecology Permit Writer. Personal Communication. Email. August 30, 2005.
- Lummi Nation Code of Law Title 17 (Title 17). 2004. Water Resources Protection Code. December 2004.
- Lummi Water Resources Division (LWRD). 1997. Lummi Nation Wellhead Protection Program --Phase I. Prepared for Lummi Indian Business Council. Lummi Reservation, Washington. November 1997.
- Lummi Water Resources Division (LWRD). 1998. Lummi Reservation Storm Water Management Program Technical Background Document. Prepared for Lummi Indian Business Council. Lummi Reservation, Washington. December 1998.
- Lummi Water Resources Division (LWRD). 2000. Lummi Indian Reservation Wetland Management Program Technical Background Document. Prepared for Lummi Indian Business Council. Lummi Reservation, Washington. March 2000.
- Lummi Water Resources Division (LWRD). 2001. Lummi Nation Non-Point Source Assessment Report. Prepared for Lummi Indian Business Council. Lummi Reservation, Washington. December 2001.
- McAllister, Rich. 2005. Assistant Regional Counsel EPA R10. Personal Communication. Email. September 8, 2005.
- McCourt, William. 2005. Lummi Tribal Sewer District Manager. Personal Communication. Emails. September 2005.
- Ross, Andy. 2005. Former Lummi Natural Resources Staff. Stormwater Inspections. September 2, 2005.
- State of Washington Department of Ecology (Ecology). 2003. Wastewater Discharge Permit Fee Program Report to the Legislature State Fiscal Biennium 2001-2003. Publication Number 03-10-090. December 2003.
- State of Washington Department of Ecology (Ecology). 2005a. Construction Storm water General Permit. <http://www.ecy.wa.gov/programs/wq/stormwater/construction/> Accessed December 14, 2005.
- State of Washington Department of Ecology (Ecology). 2005b. FinFish Hatchery Factsheet. http://www.ecy.wa.gov/programs/wq/permits/permit_pdfs/upland_fin_fish/FinFishHatchery_Factsheet.pdf. Accessed August 25, 2005.
- State of Washington Department of Ecology (Ecology). 2005c. Information on Permit Coverage. http://www.ecy.wa.gov/programs/wq/sand/gen_info.html. Accessed August 25, 2005.
- State of Washington Department of Ecology (Ecology). 2005d. Information on Ecology's Water Quality Permit Life Cycle System (WPLCS). <http://www.ecy.wa.gov/programs/wq/permits/wplcs/index.html>. Accessed August 31, 2005.

- State of Washington Department of Ecology (Ecology). 2005e. Issuing the Western WA Municipal Stormwater Permits.
http://www.ecy.wa.gov/programs/wq/stormwater/municipal/issue_permits.html#issuing_permits_general. Accessed August 25, 2005.
- Wilson, Sharon and Lidgard, Mike. 2005. EPA R10 NPDES Permit Writers. Personal Communication. Conference Call. August 31, 2005.

APPENDIX A

Impairment of Reservation Waterbodies and NPS Pollution Source Categories for Each Type of Pollutant (LNR 2001)

Appendix A – Impairment of Reservation Waterbodies and NPS Pollution Source Categories for Each Type of Pollutant (LWRD 2001)

Impairment of Reservation Waterbodies and NPS Pollution Source Categories for Each Type of Pollutant (LWRD 2001)

Waterbody	Pollutant	Source Category (subcategory)	Degree of Impairment	Comments
Nooksack River and its tributaries	Fecal Coliform Bacteria	<ul style="list-style-type: none"> ▪ Agriculture (pasture grazing, confined animal feeding operations, manure lagoons) ▪ Urban Runoff ▪ Land Disposal (on-site wastewater systems) ▪ Waste storage or storage tank leaks ▪ Spills ▪ Natural Sources 	High	<p>303(d) list (39 segments in 16 tributaries)</p> <p>Portage Bay Shellfish Closure</p> <p>Potential Lummi Bay Shellfish Closure</p>
	Fine Sediment	<ul style="list-style-type: none"> ▪ Agriculture (crop production [all types], pasture grazing, confined animal feeding operations) ▪ Silviculture (harvesting, road construction and maintenance) ▪ Construction (highway/road/bridge, land development) ▪ Urban Runoff ▪ Resource Extraction (surface mining of sand and gravel) ▪ Hydromodification/Habitat Modification (channelization, flow modification, removal of riparian vegetation, streambank destabilization, draining/filling of wetlands) ▪ Atmospheric Deposition ▪ Highway Runoff ▪ Natural Sources 	High	<p>303(d) list (main stem, South Fork, and 3 segments in 3 tributaries)</p> <p>Salmonid impacts</p> <p>Shellfish impacts in Portage Bay</p>
	Habitat Alteration	<ul style="list-style-type: none"> ▪ Agriculture (crop production [all types], pasture grazing) ▪ Silviculture (harvesting, road construction) ▪ Construction (highway/road/bridge, land development) ▪ Urban Runoff ▪ Hydromodification/Habitat Modification (channelization, flow modification, removal of riparian vegetation, streambank modification, draining/filling of wetlands) ▪ Recreation Activities (golf courses) 	High	Salmonid impacts

Impairment of Reservation Waterbodies and NPS Pollution Source Categories for Each Type of Pollutant (LWRD 2001)

Waterbody	Pollutant	Source Category (subcategory)	Degree of Impairment	Comments
Nooksack River and its tributaries	Metals	<ul style="list-style-type: none"> Urban Runoff Land Disposal (landfills) Atmospheric Deposition Highway Maintenance and Runoff 	Low	<p>Salmonid impacts</p> <p>Shellfish impacts in Portage Bay</p>
	Nutrients	<ul style="list-style-type: none"> Agriculture (crop production [all types], pasture grazing, confined animal feeding operations, manure lagoons) Silviculture (restoration, residue management, forest management) Construction (highway/road/bridge, land development) Urban Runoff Land Disposal (landfills, on-site wastewater systems) Hydromodification/Habitat Modification (channelization, removal of riparian vegetation, streambank destabilization, draining/filling of wetlands) Atmospheric Deposition Waste storage or storage tank leaks Highway Runoff Spills Recreation Activities (golf courses) 	Moderate, Possibly High	<p>303(d) list (ammonia: 2 segments in 2 tributaries)</p> <p>Salmonid impacts</p>
	Oxygen-Demanding Substances (organic enrichment)	<ul style="list-style-type: none"> Agriculture (pasture grazing, confined animal feeding operations, manure lagoons) Urban Runoff Land Disposal (on-site wastewater systems) Hydromodification/Habitat Modification (channelization, flow modification, removal of riparian vegetation, streambank destabilization, draining/filling of wetlands) Waste storage or storage tank leaks Highway Runoff Natural Sources 	High	<p>303(d) list (21 segments in 13 tributaries)</p> <p>Salmonid impact</p>

Impairment of Reservation Waterbodies and NPS Pollution Source Categories for Each Type of Pollutant (LWRD 2001)

Waterbody	Pollutant	Source Category (subcategory)	Degree of Impairment	Comments
Nooksack River and its tributaries	Pesticides, Household and Industrial Chemicals, and Oil and Grease	<ul style="list-style-type: none"> ▪ Agriculture (crop production [all types], pasture grazing, confined animal feeding operations, manure lagoons) ▪ Silviculture (harvesting and restoration, forest management, road construction and maintenance) ▪ Construction (highway/road/bridge, land development) ▪ Urban Runoff ▪ Resource Extraction (surface mining of sand and gravel) ▪ Land Disposal (landfills, on-site wastewater systems) ▪ Atmospheric Deposition ▪ Storage Tank Leaks ▪ Highway Maintenance and Runoff ▪ Spills ▪ Recreation Activities (golf courses) 	Moderate, Potentially High	<p>Potential for high degree of impact from spills, excessive use, and increasing development</p> <p>Salmonid impacts</p> <p>Shellfish impacts in Portage Bay</p>
	pH	<ul style="list-style-type: none"> ▪ Agriculture (crop production [all types], pasture grazing, confined animal feeding operations, manure lagoons) ▪ Silviculture (harvesting) ▪ Construction (highway/road/bridge, land development) ▪ Urban Runoff ▪ Resource Extraction (surface mining of sand and gravel) ▪ Land Disposal (landfills, on-site wastewater systems) ▪ Hydromodification/Habitat Modification (removal of riparian vegetation, draining/filling of wetlands) ▪ Atmospheric Deposition ▪ Storage Tank Leaks ▪ Highway Runoff ▪ Spills 	Moderate	<p>303(d) list (6 segments in 3 tributaries)</p> <p>Salmonid impact</p>

Impairment of Reservation Waterbodies and NPS Pollution Source Categories for Each Type of Pollutant (LWRD 2001)

Waterbody	Pollutant	Source Category (subcategory)	Degree of Impairment	Comments
Nooksack River and its tributaries	Temperature	<ul style="list-style-type: none"> ▪ Agriculture (crop production [all types], pasture grazing) ▪ Silviculture (harvesting, forest management, road construction) ▪ Construction (highway/road/bridge, land development) ▪ Urban Runoff ▪ Resource Extraction (surface mining of sand and gravel) ▪ Hydromodification/Habitat Modification (channelization, flow modification, removal of riparian vegetation, streambank modification, draining/filling of wetlands) ▪ Highway Runoff ▪ Recreation Activities (golf courses) ▪ Ground-Water Withdrawal 	High	<p>303(d) list (11 segments in 11 tributaries)</p> <p>Salmonid impacts</p>
Lummi River, its tributaries, and Jordan's Creek	Fecal Coliform Bacteria	<ul style="list-style-type: none"> ▪ Agriculture (pasture grazing, confined animal feeding operations, manure lagoons) ▪ Urban Runoff ▪ Land Disposal (on-site wastewater systems) ▪ Waste storage or storage tank leaks ▪ Spills ▪ Natural Sources 	High	<p>303(d) list (Lummi River, up-stream from Reservation)</p> <p>Draft Lummi WQS Violations</p> <p>Potential shellfish impacts in Lummi Bay</p>
	Fine Sediment	<ul style="list-style-type: none"> ▪ Agriculture (crop production [all types], pasture grazing, confined animal feeding operations) ▪ Silviculture (harvesting, road construction and maintenance) ▪ Construction (highway/road/bridge, land development) ▪ Urban Runoff ▪ Resource Extraction (surface mining of sand and gravel) ▪ Hydromodification/Habitat Modification (channelization, flow modification, removal of riparian vegetation, streambank destabilization, draining/filling of wetlands) ▪ Atmospheric Deposition ▪ Highway Runoff ▪ Natural Sources 	Moderate, Possibly High	<p>Salmonid impacts</p> <p>Potential shellfish impacts in Lummi Bay</p>

Impairment of Reservation Waterbodies and NPS Pollution Source Categories for Each Type of Pollutant (LWRD 2001)

Waterbody	Pollutant	Source Category (subcategory)	Degree of Impairment	Comments
Lummi River, its tributaries, and Jordan's Creek	Habitat Alteration	<ul style="list-style-type: none"> ▪ Agriculture (crop production [all types], pasture grazing) ▪ Construction (highway/road/bridge, land development) ▪ Urban Runoff ▪ Hydromodification/Habitat Modification (channelization, flow modification [levee/seawall], removal of riparian vegetation, streambank modification, draining/filling of wetlands) ▪ Recreation Activities (golf courses) 	High	<p>Salmonid impacts</p> <p>Shellfish impacts</p>
	Metals	<ul style="list-style-type: none"> ▪ Urban Runoff ▪ Land Disposal (landfills) ▪ Atmospheric Deposition ▪ Highway Maintenance and Runoff 	Low	<p>Salmonid impacts</p> <p>Shellfish impacts</p>
	Nutrients	<ul style="list-style-type: none"> ▪ Agriculture (crop production [all types], pasture grazing, confined animal feeding operations, manure lagoons) ▪ Silviculture (restoration, residue management, forest management) ▪ Construction (highway/road/bridge, land development) ▪ Urban Runoff ▪ Land Disposal (landfills, on-site wastewater systems) ▪ Hydromodification/Habitat Modification (channelization, removal of riparian vegetation, streambank destabilization, draining/filling of wetlands) ▪ Atmospheric Deposition ▪ Waste storage or storage tank leaks ▪ Highway Runoff ▪ Spills ▪ Recreation Activities (golf courses) 	Moderate, Possibly High	Salmonid impacts

Impairment of Reservation Waterbodies and NPS Pollution Source Categories for Each Type of Pollutant (LWRD 2001)

Waterbody	Pollutant	Source Category (subcategory)	Degree of Impairment	Comments
Lummi River, its tributaries, and Jordan's Creek	Oxygen-Demanding Substances (organic enrichment)	<ul style="list-style-type: none"> ▪ Agriculture (pasture grazing, confined animal feeding operations, manure lagoons) ▪ Urban Runoff ▪ Land Disposal (on-site wastewater systems) ▪ Hydromodification/Habitat Modification (channelization, flow modification, removal of riparian vegetation, streambank destabilization, draining/filling of wetlands) ▪ Waste storage or storage tank leaks ▪ Highway Runoff ▪ Natural Sources 	High	<p>Draft Lummi WQS Violations</p> <p>Salmonid impact</p>
	Pesticides, Household and Industrial Chemicals, and Oil and Grease	<ul style="list-style-type: none"> ▪ Agriculture (crop production [all types], pasture grazing, confined animal feeding operations) ▪ Silviculture (harvesting and restoration, forest management, road construction and maintenance) ▪ Construction (highway/road/bridge, land development) ▪ Urban Runoff ▪ Resource Extraction (surface mining of sand and gravel) ▪ Land Disposal (landfills, on-site wastewater systems) ▪ Atmospheric Deposition ▪ Storage Tank Leaks ▪ Highway Maintenance and Runoff ▪ Spills ▪ Recreation Activities (golf courses) 	Moderate, Potentially High	<p>Potential for high degree of impact from spills, excessive use, and increasing development</p> <p>Salmonid impacts</p> <p>Shellfish impacts</p>
	Temperature	<ul style="list-style-type: none"> ▪ Agriculture (crop production [all types], pasture grazing) ▪ Silviculture (harvesting, forest management) ▪ Construction (highway/road/bridge, land development) ▪ Urban Runoff ▪ Resource Extraction (surface mining of sand and gravel) ▪ Hydromodification/Habitat Modification (channelization, flow modification, removal of riparian vegetation, streambank modification, draining/filling of wetlands) ▪ Highway Runoff ▪ Recreation Activities (golf courses) ▪ Ground-Water Withdrawal 	High	<p>Draft Lummi WQS Violations</p> <p>Salmonid impacts</p>

Impairment of Reservation Waterbodies and NPS Pollution Source Categories for Each Type of Pollutant (LWRD 2001)

Waterbody	Pollutant	Source Category (subcategory)	Degree of Impairment	Comments
Portage Bay (and Bellingham Bay)	Fecal Coliform Bacteria	<ul style="list-style-type: none"> ▪ Agriculture (pasture grazing, confined animal feeding operations, manure lagoons) ▪ Urban Runoff ▪ Land Disposal (on-site wastewater systems) ▪ Waste storage or storage tank leaks ▪ Spills ▪ Natural Sources 	High	<p>Closure of 220 acres to commercial harvest of shellfish</p> <p>303(d) list</p> <p>Draft Lummi WQS Violations</p>
	Habitat Alteration	<ul style="list-style-type: none"> ▪ Hydromodification/Habitat Modification (channelization, flow modification, removal of riparian vegetation, streambank modification, draining/filling of wetlands) 	Moderate	<p>Salmonid impacts</p> <p>Shellfish impacts</p>
	Metals	<ul style="list-style-type: none"> ▪ Urban Runoff ▪ Land Disposal (landfills) ▪ Atmospheric Deposition ▪ Highway Maintenance and Runoff 	Low	<p>Salmonid impacts</p> <p>Shellfish impacts</p>
	Nutrients	<ul style="list-style-type: none"> ▪ Agriculture (crop production [all types], pasture grazing, confined animal feeding operations, manure lagoons) ▪ Silviculture (restoration, residue management, forest management) ▪ Construction (highway/road/bridge, land development) ▪ Urban Runoff ▪ Land Disposal (landfills, on-site wastewater systems) ▪ Hydromodification/Habitat Modification (channelization, removal of riparian vegetation, streambank destabilization, draining/filling of wetlands) ▪ Atmospheric Deposition ▪ Waste storage or storage tank leaks ▪ Highway Runoff ▪ Spills ▪ Recreation Activities (golf courses) 	Low	Salmonid impacts

Impairment of Reservation Waterbodies and NPS Pollution Source Categories for Each Type of Pollutant (LWRD 2001)

Waterbody	Pollutant	Source Category (subcategory)	Degree of Impairment	Comments
Portage Bay (and Bellingham Bay)	Pesticides, Household and Industrial Chemicals, and Oil and Grease	<ul style="list-style-type: none"> ▪ Agriculture (crop production [all types], pasture grazing, confined animal feeding operations) ▪ Silviculture (harvesting and restoration, forest management, road construction and maintenance) ▪ Construction (highway/road/bridge, land development) ▪ Urban Runoff ▪ Resource Extraction (surface mining of sand and gravel) ▪ Land Disposal (landfills, on-site wastewater systems) ▪ Atmospheric Deposition ▪ Storage Tank Leaks ▪ Highway Maintenance and Runoff ▪ Spills ▪ Recreation Activities (golf courses) 	Moderate, Potentially High	<p>Potential for high degree of impact from spills, excessive use, and increasing development</p> <p>Salmonid impacts</p> <p>Shellfish impacts</p>
Lummi Bay (and Strait of Georgia, Hale Passage)	Fecal Coliform Bacteria	<ul style="list-style-type: none"> ▪ Agriculture (pasture grazing, confined animal feeding operations, manure lagoons) ▪ Urban Runoff ▪ Land Disposal (on-site wastewater systems) ▪ Marinas and Recreational Boating ▪ Waste storage or storage tank leaks ▪ Spills ▪ Natural Sources 	Low, Potentially Higher	<p>Potential flow from Nooksack River</p> <p>Potential Shellfish impacts</p>
	Habitat Alteration	<ul style="list-style-type: none"> ▪ Hydromodification/Habitat Modification (channelization, flow modification, removal of riparian vegetation, streambank modification, draining/filling of wetlands) 	Moderate	<p>Salmonid impacts</p> <p>Shellfish impacts</p>
	Metals	<ul style="list-style-type: none"> ▪ Urban Runoff ▪ Land Disposal (landfills) ▪ Marinas and Recreational Boating ▪ Atmospheric Deposition ▪ Highway Maintenance and Runoff 	Low	<p>303(d) list (Strait of Georgia: sediments below Intalco Aluminum Plant)</p> <p>Salmonid impacts</p> <p>Shellfish impacts</p> <p>Herring impacts</p>

Impairment of Reservation Waterbodies and NPS Pollution Source Categories for Each Type of Pollutant (LWRD 2001)

Waterbody	Pollutant	Source Category (subcategory)	Degree of Impairment	Comments
Lummi Bay (and Strait of Georgia, Hale Passage)	Nutrients	<ul style="list-style-type: none"> ▪ Agriculture (crop production [all types], pasture grazing, confined animal feeding operations, manure lagoons) ▪ Silviculture (restoration, residue management, forest management) ▪ Construction (highway/road/bridge, land development) ▪ Urban Runoff ▪ Land Disposal (landfills, on-site wastewater systems) ▪ Hydromodification/Habitat Modification (channelization, removal of riparian vegetation, streambank destabilization, draining/filling of wetlands) ▪ Atmospheric Deposition ▪ Waste storage or storage tank leaks ▪ Highway Runoff ▪ Spills ▪ Recreation Activities (golf courses) 	Low	Salmonid impacts
	Pesticides, Household and Industrial Chemicals, and Oil and Grease	<ul style="list-style-type: none"> ▪ Agriculture (crop production [all types], pasture grazing, confined animal feeding operations) ▪ Silviculture (harvesting and restoration, forest management, road construction and maintenance) ▪ Construction (highway/road/bridge, land development) ▪ Urban Runoff ▪ Resource Extraction (surface mining of sand and gravel) ▪ Land Disposal (landfills, on-site wastewater systems) ▪ Marinas and Recreational Boating ▪ Atmospheric Deposition ▪ Storage Tank Leaks ▪ Highway Maintenance and Runoff ▪ Spills ▪ Recreation Activities (golf courses) 	Moderate, Potentially High	<p>Potential for high degree of impact from spills, excessive use, and increasing development</p> <p>303(d) list (Strait of Georgia: tideland sediments below Intalco Aluminum Plant)</p> <p>Salmonid impacts</p> <p>Shellfish impacts</p> <p>Herring impacts</p>

Impairment of Reservation Waterbodies and NPS Pollution Source Categories for Each Type of Pollutant (LWRD 2001)

Waterbody	Pollutant	Source Category (subcategory)	Degree of Impairment	Comments
Ground Water	Fecal Coliform Bacteria	<ul style="list-style-type: none"> ▪ Agriculture (pasture grazing, confined animal feeding operations) ▪ Urban Runoff ▪ Land Disposal (on-site wastewater systems) ▪ Waste storage or storage tank leaks ▪ Spills ▪ Natural Sources 	Low	Potential public health risk
	Nutrients	<ul style="list-style-type: none"> ▪ Agriculture (crop production [all types], pasture grazing, confined animal feeding operations) ▪ Construction (highway/road/bridge, land development) ▪ Urban Runoff ▪ Land Disposal (landfills, on-site wastewater systems) ▪ Atmospheric Deposition ▪ Waste storage or storage tank leaks ▪ Highway Runoff ▪ Spills 	Low	Potential public health risk
	Pesticides, Household and Industrial Chemicals, and Oil and Grease	<ul style="list-style-type: none"> ▪ Agriculture (crop production [all types], pasture grazing, confined animal feeding operations) ▪ Silviculture (harvesting and restoration, forest management, road construction and maintenance) ▪ Construction (highway/road/bridge, land development) ▪ Urban Runoff ▪ Resource Extraction (surface mining of sand and gravel) ▪ Land Disposal (landfills, on-site wastewater systems) ▪ Atmospheric Deposition ▪ Storage Tank Leaks ▪ Highway Maintenance and Runoff ▪ Spills 	Low, Potentially Higher	<p>Potential for high degree of impact from spills, excessive use, and increasing development</p> <p>Potential public health risk</p>
	Saltwater Intrusion	<ul style="list-style-type: none"> ▪ Silviculture (harvesting, road construction and maintenance) ▪ Construction (highway/road/bridge, land development) ▪ Urban Runoff ▪ Hydromodification/Habitat Modification (channelization, removal of riparian vegetation, draining/filling of wetlands) ▪ Ground-Water Withdrawal 	Moderate (Locally and Potentially High)	<p>Gooseberry Point wells closed</p> <p>Documented potential along Bellingham Bay and the Sandy Point Peninsula</p>